Justification for Requesting Fee in Lieu

PROPOSED RESIDENTIAL PROJECT
REED BROTHERS AT SHADY GROVE METRO
15995 FREDERICK ROAD

Silverwood/Shady Grove L.L.C.

September 26, 2011

Justification for Requesting Fee in Lieu

The Reed Brothers' project located at 15955 Frederick Road (the "Property") exceeds its threshold for Tree Cover requirements and at least 70% of its Forestry requirements on site. In accordance with the City's Forest and Tree Preservation Law, Section 10.5-24(a), the Applicant seeks approval of a fee-in-lieu for the balance of the forestry requirement. The Property is currently improved with a surface parking lot and has less than 0.12 acres of existing forest and no significant trees outside the forest area. One significant tree in the forest area will be removed and replacement is being provided on site. The redevelopment of the Property provides the opportunity to transform an underutilized impervious surface lot with a minimal number of trees and outdated stormwater management measures into a sustainable project constructed in compliance with the City's Green Building Law, with 15% tree cover, 35% percent pervious surface and environmentally sensitive design stormwater management measures. More importantly, the project brings 417 units to the doorstep of a Metro station which will increase the use of public transportation and eliminate weekday commuter trips by up to 40 percent. The building also offers 20% of its total units to affordable housing be it either MPDU's or workforce housing.

After providing 25,800 sf of Forest Credit on-site, the Reed Brothers project requests the use of fee in lieu for an additional 6,700 sf of forest mitigation needed to meet the requirements of the City of Rockville's Forest and Tree Preservation Ordinance. As shown on the Landscape Plan being submitted concurrently with the Preliminary Forest Conservation Plan, approximately 144 individual landscape trees are proposed to be planted on-site and in the public right-of-way along MD 355 in accordance with the permitted reforestation/afforestation planting requirements of the Ordinance. The project preserves 2,137 sf of existing forest which is being enhanced by additional plantings and meets 79% of the required planting of 32,500 sf onsite with the landscape plantings.

On sheet two of the attached Preliminary Forest Conservation Plan, the Forest Conservation Worksheet calculates the required reforestation and afforestation and highlights the specific trees that meet these requirements. The Plan also calculates landscape credits based on 400 sf for each shade or evergreen tree and 200 sf for each ornamental tree as stipulated in the Ordinance. The remaining mitigation requirement of 6,700 sf is identified on the Plan along with the proposed Fee in Lieu payment calculation.

There are several reasons why providing more planting space on-site cannot be accomplished and would render it extremely difficult to reasonably develop the Property. Section 10.5-24 of The Forest and Tree Preservation Ordinance provides for this situation by allowing a payment in lieu of planting. In order to contribute to the City's Forest Conservation Fund and the Park Maintenance Fund in lieu of providing onsite reforestation/afforestation, the Ordinance requires a written justification statement demonstrating that tree replacement, reforestation or afforestation cannot be accomplished on-site.

Factors limiting planting space result from all four of the constraints listed in Item (1) above, as follows:

Right-of-way dedications -- Despite the fact that the Corridor Cities Transitway ("CCT") is not yet a master planned alignment, the project has been asked by the Maryland Transit Authority to set aside area for the CCT paralleling the Metro Access Drive. The amount of dedication or reservation requested is 50 feet from the existing property line. This exceeds the master plan section required by the Montgomery County's Shady Grove Sector plan of 120', half of which would be accommodated on this side of the 80' Metro Access Drive by 30 feet. The Site Plan initially proposed to set aside that would take 25 feet off the frontage of the Property along the Metro Access Drive frontage for a total of 13,027 square feet. In addition, another 25 feet are currently shown to accommodate the additional with requested. The area of this additional dedication is 13,535 SF. This area represents approximately 41% of the required planting of 32,500 sf and could accommodate approximately 20 to 25 shade trees that would provide 8,000 to 10,000 sf credit, meeting 25% to 30% of the reforestation/afforestation planting requirement.

In order to accommodate the additional setback for the CCT, the building has been increased to six (6) stories along MD355 to maintain a unit count of 417 originally filed with the Site Plan. This was possible as the section of the building closer to MD355 is already proposed to have a concrete podium with now 5 additional wood frame stories above. The parking garage will likely also change to 6 stories and the additional residential units at the northern portion of the building are already at the maximum buildable height of an all wood frame building of 5 stories. Also, the CCT dedication is limiting the buildable envelope and an initial 30' area for planting and Stormwater manangement was found to be reasonable along the northern boundary, along the storage facility. Finally, 34 ornamental trees and 1 shade tree, are to be planted for landscaping in the area reserved for the CCT. No credit is being seeked for this planting. If credit were granted, they would represent, approximately 7,200 sf.

Other City Development Standards -- Besides the more practical matters described above, the project is being developed under the MXTD zone which requires that 10 percent of the Property be devoted to public use space, a set aside that is intended to be accessible to the general public. While we want to maximize the tree cover proposed on site, we also want to make the public use area along the northwest boundary inviting, and additional trees may make it quite secluded and render very little usable area. Plantings in this area can be credited toward forestry requirements but these areas limit the ability to provide real forest creation and heavy tree cover because other improvements must be provided to ensure the area is publicly accessible. While the zone does not require any setback, as mentioned above, the project proposes setbacks of 30', to meet forest and tree cover requirements and to provide stormwater management and satisfy fire access requirements.

Stormwater management for the project provides three surface bio-filtration facilities around the perimeter of the site and permeable surfaces and surface bio-filtration facilities in the courtyards of the building. These meet the City requirements of environmentally sensitive design, as outlined in the pre-application Stormwater concept approval. Although these facilities are planted and must be maintained, and over time the City may even require that the plantings be replaced, the trees in these facilities, nonetheless, cannot be credited toward forest planting requirements.

If the stormwater management area trees could be included, they would result in up to 30 additional trees, with a credit of 7,800 sf in addition to the current credit proposed would be providing 97% of the planting requirement for re-forestation and afforestation on site. From a practical matter, it is anticipated that the trees in these areas will be retained for a significant amount of time (and if eliminated then immediately replaced) and thus serve the objective of the Forest and Tree Preservation Law.

One of the purposes of the MXTD Zone is to minimize automobile use and maximize the use of public transportation. That this is an objective of the MXTD Zone is clear from the development standard permitting a height of 120 feet in the MXTD Zone. This standard allows for the desired population concentrations within the transit oriented areas of the City. To this end, the Applicant has made every effort to maximize the residential density on the Property, recognizing the restrictions imposed by the Building Code, which preclude the project from exceeding five stories in height, absent a prohibitively costly change in the construction type. Thus, the proposed footprint of the building, which is intended to maximize the number of units within walking distance of the Metro, precludes the Applicant from providing all of the required forest conservation requirement on-site.

The configuration of the proposed building is influenced by the limitations discussed above, as well as the current realities of the real estate market, which make concrete construction (beyond the concrete podium & wood frame combination currently used) infeasible in this location. These factors, combined with the Property's proximity to the Metro Station, have driven the design of the building and dictate its proposed configuration. The Shady Grove Metro Station entrance is only 800 feet from the project. Sustainable design principles suggest that areas within ¼ mile of transit facilities should be developed with densities that both support transit use and encourage pedestrian activity. As noted above, the goal of concentrating densities at metro stations and increasing the use of public transportation is one of the stated purposes of the MXTD Zone. The Reed Brothers project is a redevelopment project that is taking the first step toward addressing these goals for the west side of the Shady Grove Transit Station.

Altering the site to provide 17 more trees or 6,800 sf, in addition to the 30,800 sf of landscape credit planting already being proposed on this site, would further impact an already constrained project and reduce the number of units that could be built by approximately 30 to 45. We have analyzed and illustrated below that each time that you reduce the building footprint of a portion of the building that contains residential units by 20 to 30 feet to accommodate an additional row of trees along the northern end of the site would reduce the number of units by 3 units per floor, with 5 floors = 15 units. This exercise yields an additional 7 or 8 trees if applied to one third of the building length which is the northernmost area surrounding the northern courtyard. The required additional 17 trees would then need the building to be reduced approximately two to three times as much. Also to be considered, in the center of the building is the courtyard containing Stormwater facilities that would have to be reduced as well and would have to accommodate this change.

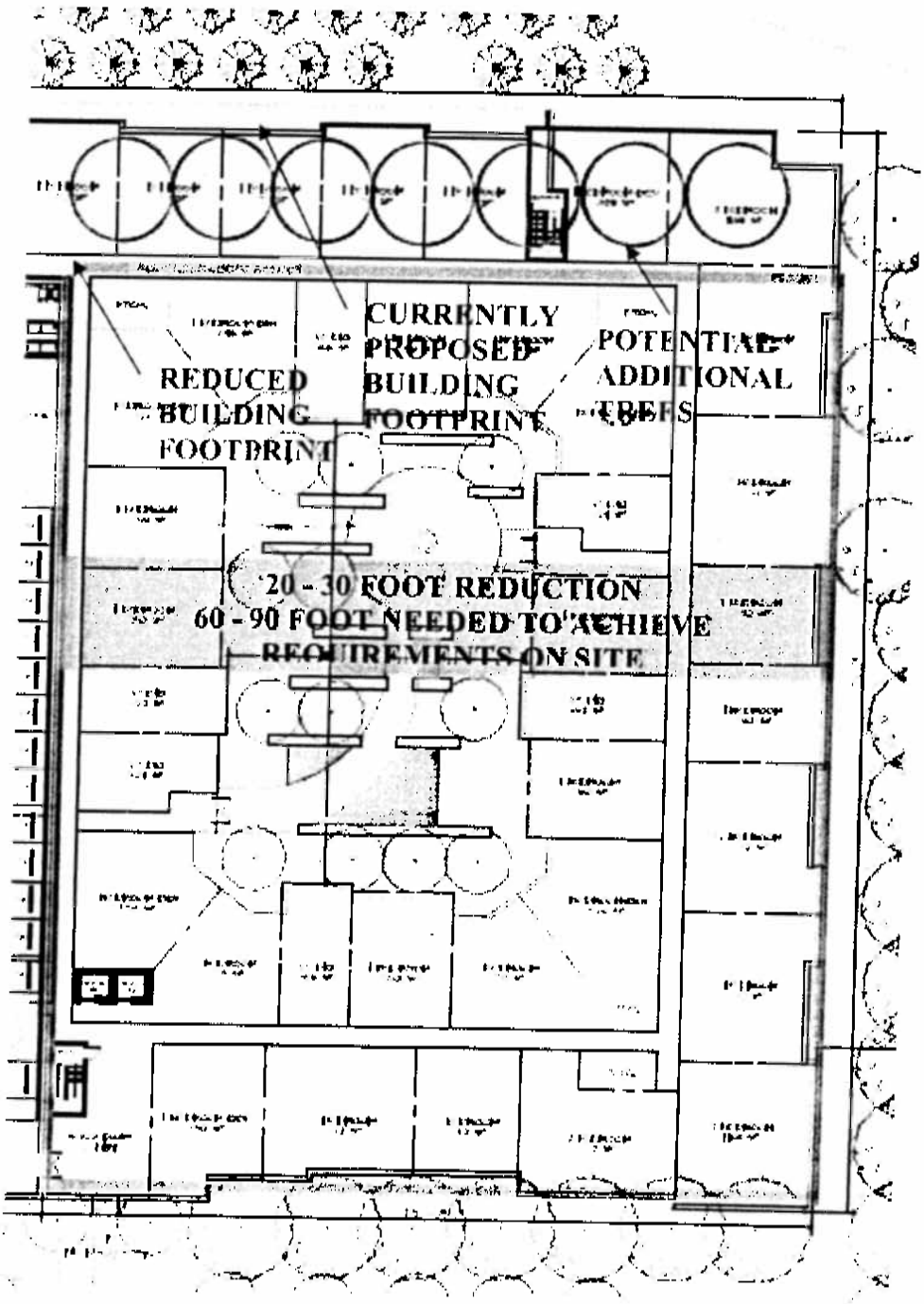


ILLUSTRATION OF REDUCED BUILDING FOOTRPINT IMPACT UNIT ANALYSIS

These are units that would begin to provide the necessary critical mass at the metro station that will make for a vibrant transit orient development. More importantly, from a strictly quantitative perspective, increasing the number of residential units at this Metro Station location, which translates to a significant reduction in commuter traffic, in our opinion this is a greater benefit to the environment than the provision of the additional on-site trees. While creating forests is an environmentally sound objective, realistically, on urban sites such as the Property, it is not forest that is created but tree canopy and landscaping. To this end, the project is transforming an impervious lot currently used for automobile sales into an attractively landscaped site with the plantings proposed under the submitted Landscape Plan. In addition to providing an attractive landscaped development, an important component of the project is that it is preserving and enhancing on-site, a portion of the forest contiguous to the existing forested stream valley park owned by Montgomery County located immediately adjacent to the Property.

Consideration has been given to removing the pipe along the building facing the storage facility and adding a row of trees along this area but it was recognized that this area is 25 feet wide by 440 feet long (11,000 sf). The 28 evergreen trees being planted in this area are already achieving 11,200 sf of credit towards reforestation/afforestation. Different configurations of the trees have not rendered an additional count that would allow each tree a healthy area to grow in.

If the additional CCT dedication was not required, the building footprint could potentially shift 25 feet towards the Shady Grove Metro Access Drive. This would allow for one or two rows of additional trees to be planted on the side of the building. This would result in approximately 22 - 25 trees for an additional 8,800-10,000 sf of re-forestation credit to be counted. (see illustration below). Similarly, without shifting the building, the landscaping in that area could be counted as explained above in the Right-of-way dedications section

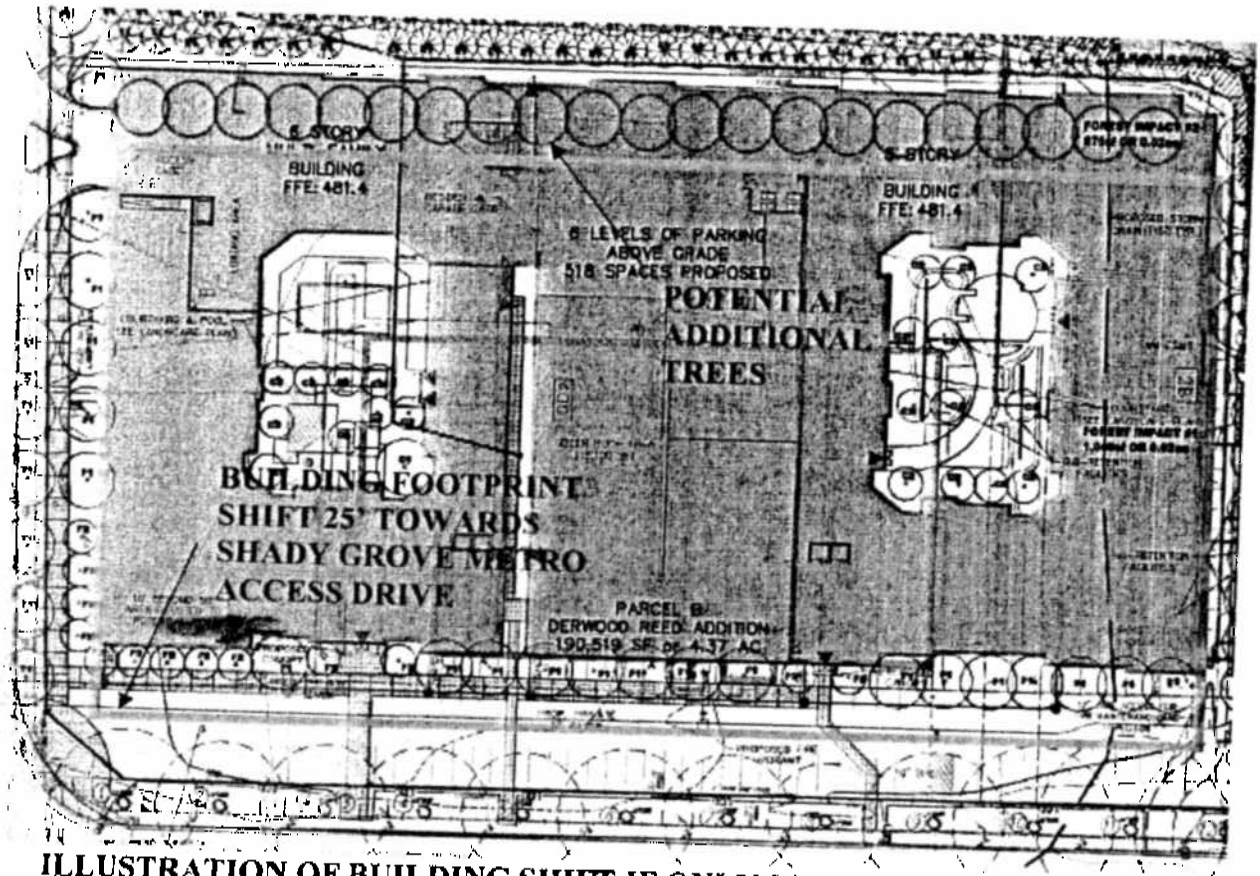


ILLUSTRATION OF BUILDING SHIFT IF ONLY 25 FEETCCT RESERVATION WERE REQUIRED

The Preliminary Forest Conservation Plan demonstrates that the Landscape Plan provides more than the minimum Tree Cover requirement. There is 30,800 sf of Tree Cover or 17% while only 10% is required. This requirement is met by a combination of forest preservation, 2,137 sf, and landscape plantings onsite.

For the reasons set forth above, we respectfully request approval of the contribution to the City's Forest Conservation Fund and the Park Maintenance Fund in lieu of providing onsite reforestation/afforestation.

POLYSONICS
Acoustics & Technology Consulting

December 23, 2010

Mr. Richard Lundregan
Silverwood Investments, LLC
1925 Isaac Newton Square, East, Suite 110
Reston, VA 20190

Project: Reed Brothers Automotive

Subject: Outdoor Noise Test Report

Dear Mr. Richard Lundregan,

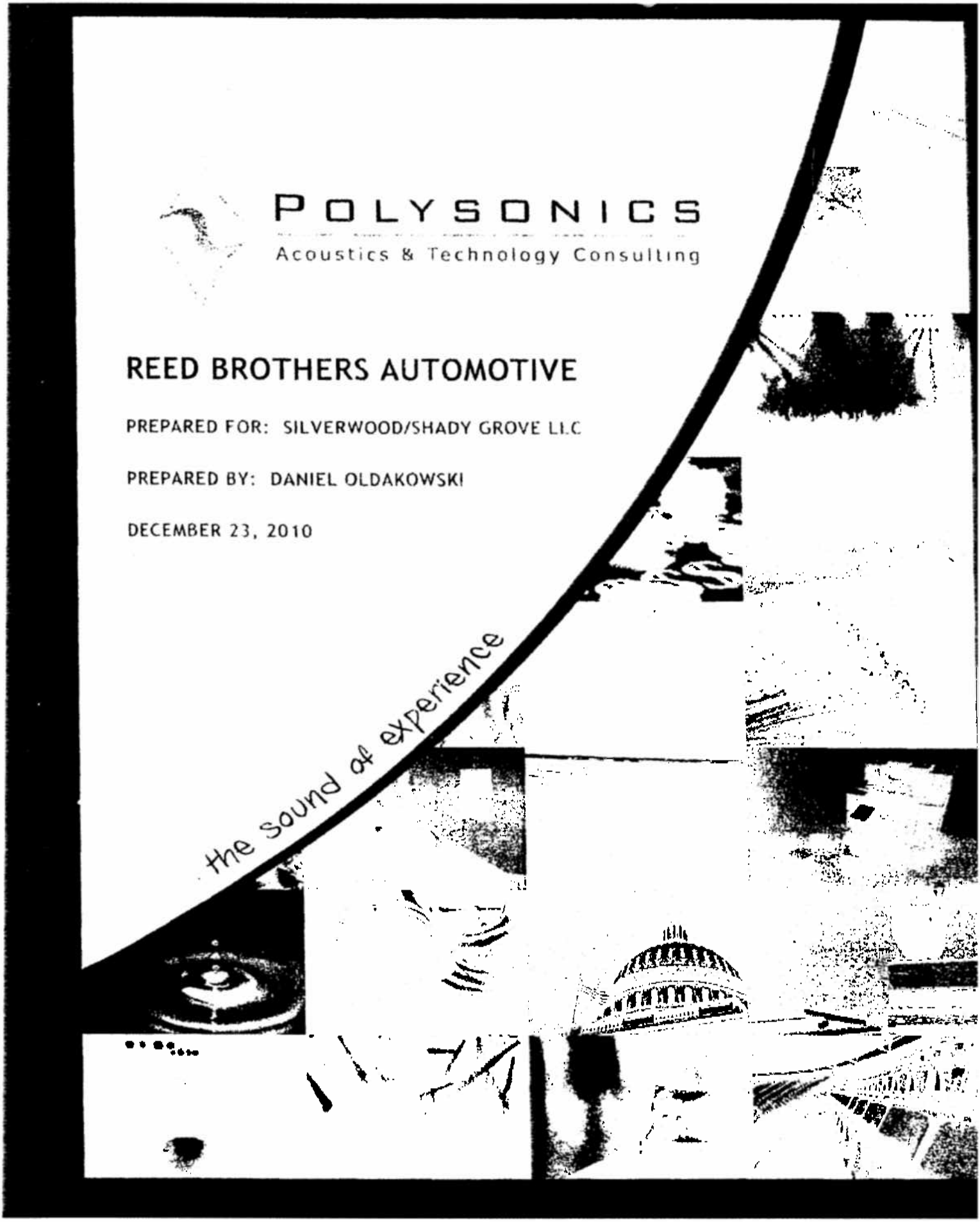
Polysonics performed an outdoor noise survey for the Reed Brothers Automotive site to determine noise levels on the site due to the Montgomery County Solid Waste Transfer Facility in the vicinity of the site. Based on the results of this survey noise levels are expected to generally be below 65 dBA with noise levels exceeding 70 dBA for short durations.

Details of this survey are contained herein.

Please let me know if you would like any further information.

Sincerely,
Polysonics Corp.

Daniel Oldakowski
Associate Consultant
Direct line: 540-341-4988 x-2123


POLYSONICS
Acoustics & Technology Consulting
REED BROTHERS AUTOMOTIVE
PREPARED FOR: SILVERWOOD/SHADY GROVE LLC
PREPARED BY: DANIEL OLDAKOWSKI
DECEMBER 23, 2010
the sound of experience

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OUTDOOR NOISE MEASUREMENT PROCEDURE

Polysonics has recently performed an outdoor noise survey for the Reed Brothers Automotive site located in Montgomery County, Maryland in order to determine noise levels at the site. The noise source of concern is the Montgomery County Solid Waste Transfer Facility (SWTF), located northwest of the site.

On December 2, 2010 Polysonics performed on-site noise testing at the Reed Brothers Automotive site site. Precision sound equipment was used in order to analyze noise levels at the site. During the survey Polysonics staff remained on the Reed Brothers Automotive site to document activities which may impact noise levels. These included noises from the SWTF, Reed Brothers Automotive, and the surrounding roadways. Noises were noted which were audible at the measurement location. Figure 1 shows the site with the measurement location and SWTF.

In order to isolate noise from the SWTF noise measurements were taken at the northwest corner of the site closest to the SWTF. Buildings located on the Reed Brothers Automotive site and the adjacent site blocked line of site to Route 355, located south of the site, thus reducing the impact of noise from Route 355 on the measurement. This location was approximately 320' from King Farm Boulevard where metro busses traveled during the survey. The site also experienced noise from aircraft flyovers.

Based on on-site observations the major noise sources from the SWTF were equipment noise and trash noise. Equipment noise constituted mainly engine noise, scraping from front loaders on pavement, tire noise, and backup beepers. Trash noise constituted noises associated with trash compaction.

NOISE CODES

Chapter 31B of the Montgomery County Code contains the County noise ordinance. According to 31B-10 the noise code does not apply to "public utilities"[1] Polysonics understands the SWTF is a public utility, and as such is exempted from the limits imposed in the noise ordinance. However, to provide perspective on the noise levels measured at Reed Brothers Automotive site, the Montgomery County Noise code for residential noise sources will be used. Montgomery County code permits 65 dBA noise levels at the receiving residential property line during daytime hours and 55 dBA during nighttime hours[2], The noise ordinance defines daytime as "7 a.m. to 9 p.m. on weekdays and 9 a.m. to 9 p.m. on weekends and holidays"[3] and nighttime as the remaining hours of the day.

The SWTF must comply with Maryland State Codes regarding noise. Specifically COMAR 26.02.03.03, which regulates noise levels at the property line to 67 dBA.

RESULTS AND DATA ANALYSIS

Detailed charts showing the measured noise levels (L_{eq} 1-min) and time of occurrence are enclosed for reference (Figure 2). Please note that while the L_{eq} 1-min is the 1 minute averaged noise level, the 12-hour L_{eq} corresponds to a 12-hour, time-averaged noise level.

[1] Montgomery County Code, Chapter 31B, Section 10, Subsection a, Paragraph 2
[2] Montgomery County Code, Chapter 31B, Section 5, Subsection a, Paragraph 1
[3] Montgomery County Code, Chapter 31B, Section 2, Subsection C

Overall noise levels as determined from the survey were 64 dBA $L_{eq\ 12\text{-}hour}$. Noise levels varied above and below the 64 dBA level, with the highest noise levels reaching 78 dBA and the lowest reaching 48 dBA. A detailed discussion of the noise levels measured follows. Noise levels and the time of occurrence are shown in Figure 2.

Based on the results of this analysis overall sound levels measured on site due to SWTF activity are 64 dBA with short periods of increased noise levels. Noise levels impacting the Reed Brothers Automotive site is expected to generally be below 65 dBA. Overall results indicate that the sound levels peak during the morning, then drop sharply and begin to increase until approximately noon, at which point they level off. At approximately 4:00pm noise levels begin to drop, leveling off at approximately 5:00pm and remaining at these levels for the remainder of the day. Based on our on-site observations, noise levels at the site due to sources other than the SWTF contributed to the overall noise levels measured throughout the day.

Based on our logs, during the time period from 7:00am to 8:00am trucks were active at the Reed Brothers Automotive site in the vicinity of the measurement equipment. During this time the SWTF was active with noise generated from backup beepers, trucks, and trash. The noise levels shown on the attached chart during this period are a combination of SWTF and Reed Brothers Automotive noise. Due to the combination of SWTF and Reed Brothers Automotive activities sound levels measured during this period may be higher than would be measured at the site due to only the SWTF.

From approximately 8:00am to 8:15am noise levels increase to approximately 67-70 dBA. On-site observations were not available during this time.

At approximately 8:20 noise levels increase to approximately 66 dBA. During this time there was activity at both the SWTF and Reed Brothers Automotive. Due to the combination of SWTF and Reed Brothers Automotive activities sound levels measured during this period may be higher than would be measured at the site due to only the SWTF.

From this time until approximately 11:25 noise levels remained at near 60 dBA and no erroneous noises were reported. At approximately 11:25 noise levels measured 78 dBA and no erroneous noises were reported. Based on this measurement noise levels from the SWTF may occasionally exceed 75 dBA.

Noise levels remain generally at approximately 60-65 dBA until 4:00pm when noise levels begin to decrease. Over the next hour noise levels decrease to approximately 55 dBA where they remain for the reminder of the day. Based on on-site observations SWTF activity began to drop off during this time period with only intermittent activity until approximately 5:00pm when activity increased until approximately 6:00pm. At this time SWTF activity reduced to an event every 5 minutes.

The results of this survey should be used for general planning purposes only. A detailed analysis with computer modeling of the SWTF noise should be performed to determine the potential impact to proposed developments on the Reed Brothers Automotive site. The noise levels measured are an aggregate of noise sources in the vicinity of the site. While efforts were made to limit the effects of ulterior noise sources, the SWTF itself may produce noise levels lower than those measured.

DISCUSSION AND CONCLUSIONS

Based on the results of this analysis noise levels from the SWTF are generally between 55 and 65 dBA with noise levels exceeding 75 dBA for short durations. Noise levels are generally loudest during the middle of the day. Noise levels are generally lower than those specified in COMAR

26.02.03.03. Noise levels measured during this survey indicate that the SWTF generally impacts the site below 65 dBA. The Montgomery County Noise ordinance uses this limit for residential properties.

In general noise levels of 65-70 dBA are not uncommon in urban corridors, levels exceeding 70 dBA can be experienced when building are built very close to high volume roadways. This noise is usually the result of traffic noise, such as from cars, trucks, busses, etc. These noise levels are regulated by the Maryland-National Capital Park and Planning Commission (M-NCPPC).

The (M-NCPPC) considers noise impact to residential developments. M-NCPPC guidelines specify outdoor and indoor noise levels of 65 dBA and 45 dBA, respectively. The noise levels measured from the SWTF are generally below 65 dBA, and with standard construction methods indoor noise levels are expected to be below 45 dBA. Please note that building plans can be reviewed to verify indoor noise levels.

When noise levels exceed 65 dBA steps can be taken to reduce the overall noise impact. For example, building construction can be enhanced to reduce indoor noise. Enhancements may include the addition of resilient channels or masonry veneers to exterior walls, increasing the Sound Transmission Class of windows and exterior doors, reducing the amount of fenestration, or a combination of these. Site planning can be used to reduce the effect on outdoor recreation areas.

To minimize the effect of SWTF noise on developments at the Reed Brothers Automotive site, outdoor recreation areas can be placed away from the SWTF, preferably in a courtyard, which would provide building shielding to the outdoor space. Enhanced windows can be used in the facades directly facing the SWTF. Residents who are not directly facing the SWTF are expected to experience noise levels lower than those measured. A detailed analysis with computer modeling can be performed to determine specific noise impacts once site plans and building plans become available.

Figure 1: Image showing the Reed Brothers Automotive site with the Solid Waste Transfer Facility and Measurement Location.

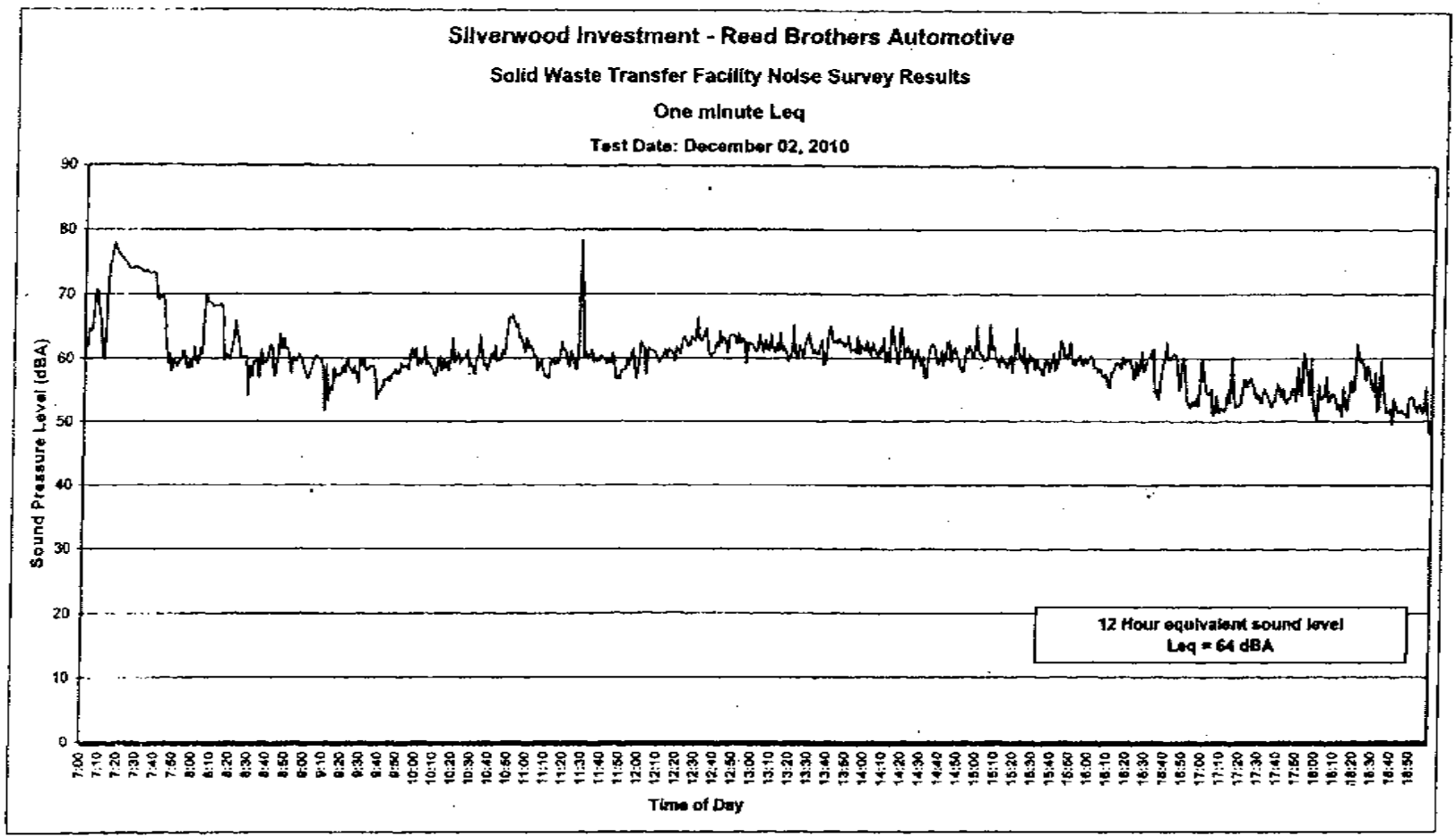

Figure 2: Outdoor Noise Levels from the December 2, 2010 Noise Survey.

Attachment

Odor Sampling and Analysis at the Montgomery County Waste Transfer Facility in Rockville, Maryland

SULLIVAN
ENVIRONMENTAL
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Established 1988

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June 30, 2011

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The field olfactometer readings from all three days of sampling showed no odors to low odor impacts on the northwest edge of the Reed Brothers Dodge facility, and all other locations downwind of the waste transfer facility. All odor impacts were observed to be light, variable, and were never strong enough to be consistently detected when two dilutions were applied to the olfactometer. The odor lab results) provided comparable results. The readings of the odor lab were based on the perception of a five-person panel. Four of the 18 samples, including three at the northwest edge of the Reed Brothers Dodge property (symbol #4 on Figure 4) and one at the Metro garage (symbol # 6), were observed to have the least desirable odors, although on a scale of 0 to -10, they were found to be less than -1, i.e. near neutral odors.

The hedonic scale is an effective indicator of the nature and intensity of the odors. This is a scale where -10 is a very obnoxious odor and +10 is a very pleasant odor (zero is no odor). The samples we have taken at the locations shown in the Figure 4 and downwind of the trash transfer facility are in the range of -0.8 to +0.2 on this scale (based on averaging duplicated samples), i.e. very close to neutral odor. These are very light odors, and in some cases (most likely related to vegetation-related waste) were perceived at least by some panel members as a pleasant odor (i.e. the 0.4). Refer to Figure 11 on Page 23 for a graphical description of the odors.

As shown in the modeling analyses contained in this report, there are existing residential units (Kings Farm) that are significantly closer to the trash transfer facility. It would be expected that any potential odor impacts at the Silverwood facility would be less than at the existing Kings Farm residential area. Dispersion modeling of peak normalized 1-hour concentrations support this conclusion.

Objective

The objective of this study is to characterize the odors from the waste transfer facility based on field dilution threshold ratios, odor panel analysis, and dispersion modeling of five-years of hour-by-hour meteorological data (to identify typical and worst case dilution ratios).

Description of Facility

Figure 1 shows an aerial map of the waste transfer facility location and its relation to the Silverwood property. The hours of operation of the transfer facility for residential deliveries are 7:00 AM to 8:00 PM during weekday operations, and 7:00 AM to 5:00 PM for commercial truck deliveries. The busiest times of the day are mid day (for commercial deliveries) and early evenings (for residential deliveries). Figure 2 shows the property boundary. Figure 3 shows a broader view of the source area, with the Silverwood property identified. Figure 4 provides a broader view of the general area and identifies the odor sampling locations.

Figure 1. Waste Transfer Facility and Vicinity

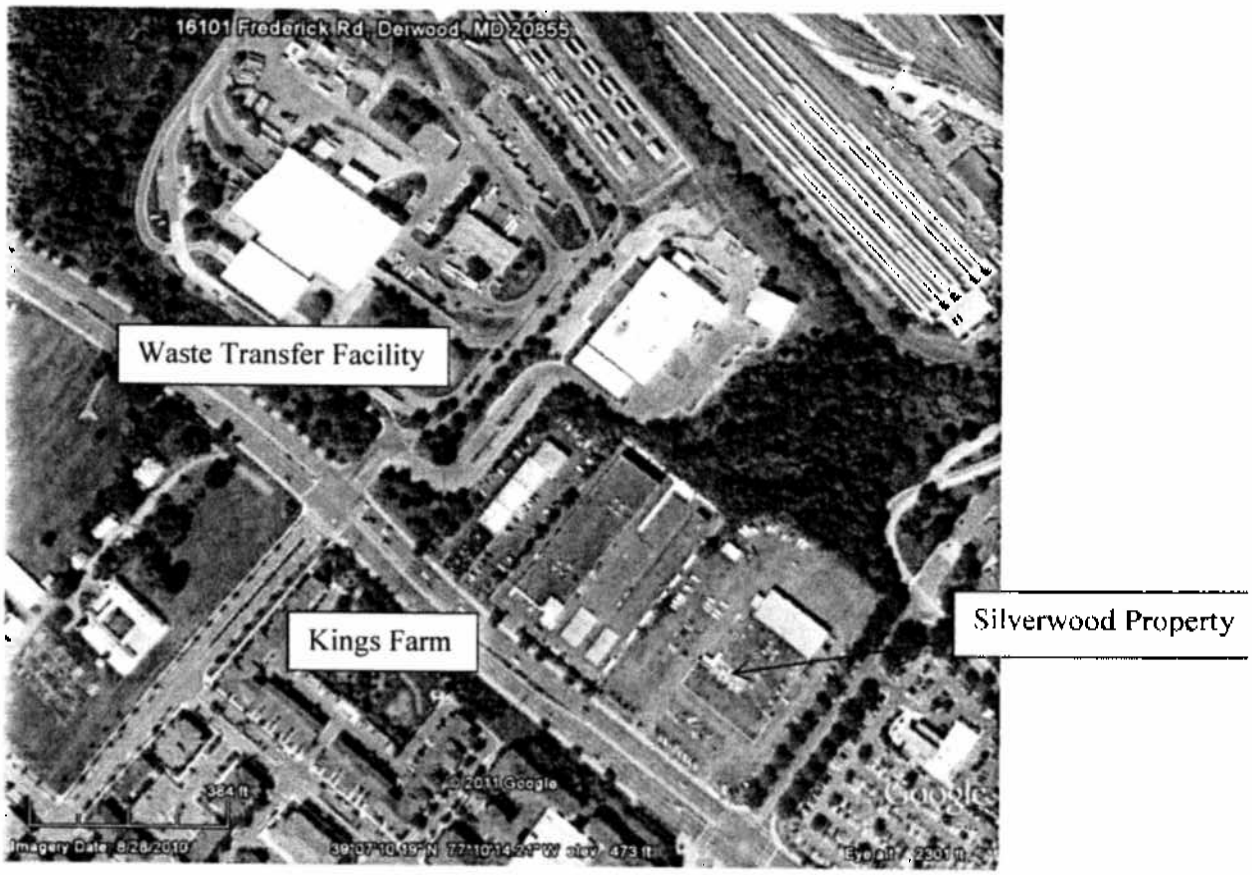


Figure 2. Waste Transfer Facility Property Boundary Map

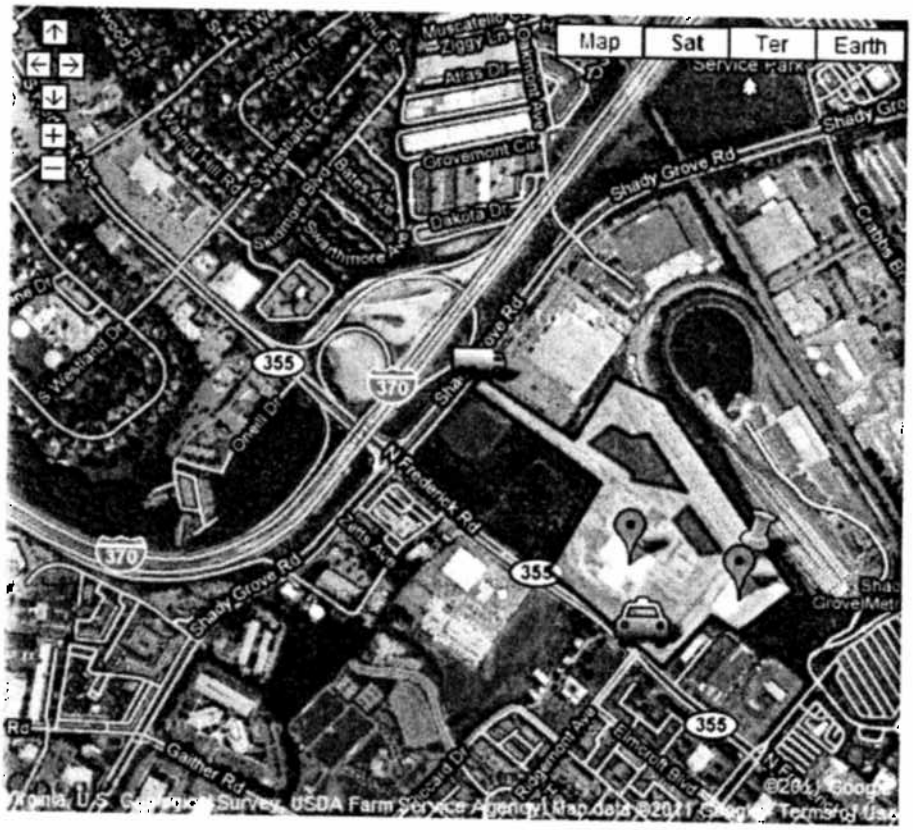


Figure 3. Location of Silverwood Property (formerly Reed Brothers Dodge)

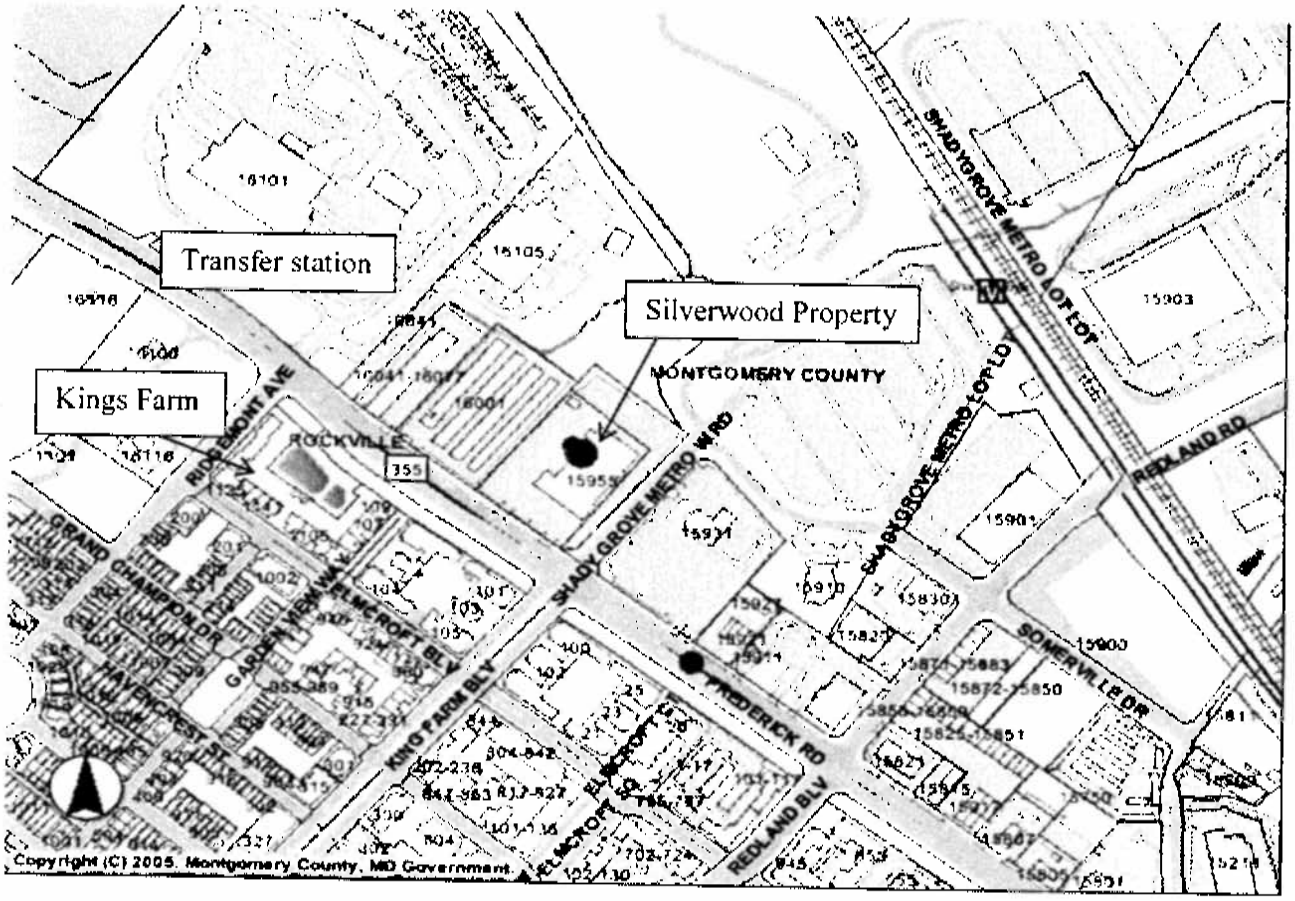
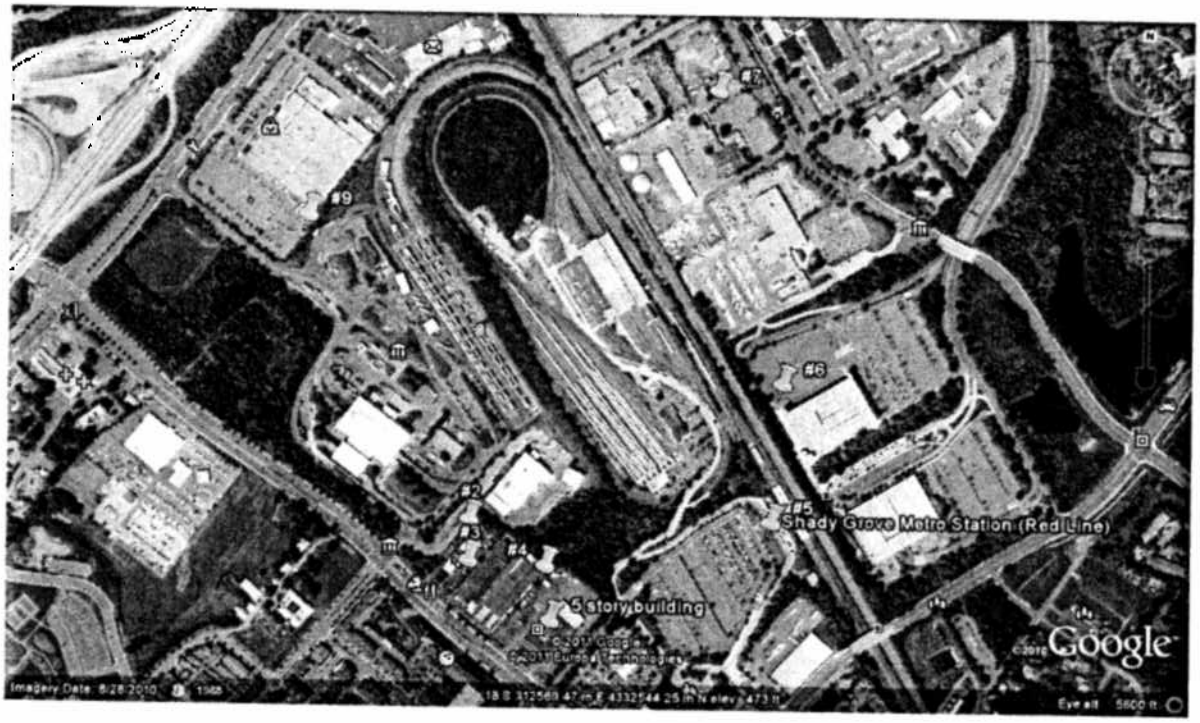


Figure 4. Larger Scale Map and Odor Sampling Locations



Technical Approach

This project involved three major technical components:

(1) Collection of field data to support a dilution ratio analysis and evaluation of the intensity and characteristics of the emissions from the waste transfer facility. Field data consisted of field olfactometer readings and the collection of Tedlar bag air samples for odor analysis.

(2) Dispersion modeling analysis to identify typical and worst case dilution ratios using both the AERMOD and ISTS3 air quality models.

(3) Odor laboratory analysis of dilution ratio, odor characteristics, and odor intensity analysis.

Staff members of Sullivan Environmental collected samples at different times of the day over a three day period (of which two of the three days sampled were virtually worst case odor days from a meteorological standpoint) to support the collection of a representative data set.

Field Operations

The objective of the field work was to assess odors during typical and upper-bound throughput times, to capture periods with good dispersion (high dilution ratios) as well as periods more likely to have suppressed atmospheric mixing / dilution conditions (low dilution ratios). The field olfactometer readings were typically taken by three Sullivan Environmental Consulting, Inc. staff members that were involved in the field study and on the final day were taken by one air sampling specialist. The following is a brief description of the sampling procedures used for this analysis.

The downwind direction was identified and field olfactometer-based dilution ratios, wind speed, wind direction, ambient temperature, and Tedlar bag samples (when collected) were recorded or collected. The results were recorded in the form as shown in Appendix A. In addition, odor samples were taken during conditions, when odors were detected, and during spaced time intervals for odor lab analysis. These Tedlar odor sample bags were packed into shipping containers provided by the laboratory and placed in a secure location in the vehicle and out of the sun prior to same day overnight shipping. During each monitoring time period, the following meteorological data was collected and recorded on an ongoing basis: wind speed, wind direction, and ambient temperature. Sunny conditions were observed on each of the three days evaluated.

The GPS coordinates of the sampling locations were recorded on the sample log sheets as well as the specific time of the olfactometer sampling and bag sample collection.

Equipment used for Field Operations

- St. Croix Sensory Field Olfactometer
- New cartridges for field olfactometer
- 18 10L Tedlar air sample bags
- 2 SKC PCRX series air sampling pumps
- SKC Vac-U-Chamber negative pressure air sample collection system
- Shipping boxes for Tedlar bag samples
- Kestrel 4500 Portable meteorological monitoring system

Odor Laboratory Analysis

St. Croix Sensory Laboratory of Lake Elmo, Minnesota provided the odor panel analysis for this study (see Table 1). The odor laboratory initially analyzed 12 samples for dilution to threshold, intensity, and characteristics of the odor. These samples were collected June 8-9, 2011, which had record-setting maximum daily temperatures in the range of 99 to 100 F. An additional day, June 11, 2011 was added to be more representative of more typical warm weather conditions, with a maximum temperature of 77.6 degrees F (during sampling). These additional six samples were analyzed by the odor lab and gave results similar to the results of June 8th and June 9th.

The Tedlar bags themselves have about a 30 to 50 dilution ratio, with a chemical or vinyl characteristic, which is present in nearly all of the samples collected and analyzed and is typical of Tedlar bag sampling. For example, in round numbers a dilution of 100 is about a 2x dilution relative to the blank.

The most critical characteristic in terms of this study is "offensive" odors. This most likely relates to the trash transfer operations at the facility. This odor was detected in 4 of the 18 samples, including at Reed Brothers Dodge (Site #4) and the metro garage (Site #6). The intent of this study was to determine if the transfer station generates odors that would adversely impact the Reed Brothers Site. As discussed below, the study reveals that a slight, almost negligible odor was identified in 4 of the 18 samples collected at the Reed Brothers Dodge site (Site #4) and the Metro garage (Site #6).

The analytical results of the odor lab were based on the perception of a five-person panel. In most cases, the dilutions were less than 100, which are considered low to no odor. The hedonic scale is a good relative indicator of the intensity and general character of the odors. This is a scale where -10 is a very obnoxious odor and +10 is a very pleasant odor (zero is no odor). The readings taken at the distances shown in the map (see legend) and downwind of the trash transfer facility are in the range of -0.8 to +0.2 (averaging the readings when duplicates were present). These are light odors and in some cases (most likely related to mulch or flowers) were perceived at least by some panel members as pleasant. Note that when the odors were noted in four samples, that the hedonic scale was only in the range of 0 to -0.8, i.e. very light near neutral odors. Refer to Figure 11 on Page 23 for a visual depiction of the odor scale.

It is important to note the relative dilution from the locations of these samples and the central location of the proposed Silverwood structure (including dilution with height). The figures in this report based on normalized dispersion modeling were used to identify the expected further dilution from sites #2 and #4, which are along similar trajectory as the proposed structure. Tables are provided that show the dilution for each floor of the proposed building relative to the location of the samples evaluated by the odor laboratory. As shown, significant further dilution can occur because of the greater distance from the facility and the height differential for the upper floors of the proposed Silverwood structure as compared to the odor sampling locations. Such dilution would further decrease the detectability of the odors.

It is important to note that there are existing residential units (Kings Farm) that are significantly closer to the trash transfer facility. It would be expected that at the Silverwood facility any potential odor issues would be less than at the existing Kings Farm residential area.

Table 1. Odor Panel Analysis – Summary Table

	ASTM E679 & EN13725		ASTM E544	CHARACTERIZATION	
Sample Site, Time, Date	Detection Threshold	Recognition Threshold	Intensity	Hedonic Tone	Principal Odor Descriptors
#2 1050 6/9/11	50	25	19	-0.6	Chemical, Earthy
#2 1045 6/9/11	80	40	25	-0.6	Chemical, Floral, Offensive
#4 1025 6/9/11	85	40	35	-1.0	Chemical, Earthy, Floral, Offensive
#4 1035 6/9/11	75	40	45	-0.6	Chemical, Floral, Offensive
#6 0932 6/9/11	220	150	30	-0.2	Chemical, Floral
#6 0955 6/9/11	190	90	35	-0.4	Chemical, Floral
#4 1343 6/9/11	90	55	17	0.0	Chemical, Medicinal
#4 1350 6/9/11	85	50	15	0.4	Chemical, Medicinal
#7 1310 6/9/11	75	45	13	0.2	Chemical, Medicinal
#7 1312 6/9/11	110	65	17	0.0	Chemical, Medicinal
#4 1425 6/9/11	110	70	18	-0.2	Chemical, Medicinal
#4 1435 6/9/11	110	70	18	-0.6	Chemical, Medicinal
#4 1241 6/13/11	100	65	25	0.2	Chemical, Floral, Medicinal
#4 1249 6/13/11	60	35	16	0.2	Chemical, Floral, Medicinal
#4 1245 6/13/11	70	45	16	0.0	Chemical, Floral
#4 1253 6/13/11	110	60	16	0.0	Chemical, Offensive, Floral, Medicinal
#4 1624 6/13/11	150	75	21	0.0	Chemical, Medicinal
#4 1627 6/13/11	120	55	15	-0.2	Chemical, Floral

Dispersion Modeling Analysis

The state-of-the-art AERMOD dispersion model was run to compute concentrations within the 1 km radius of the facility and with a special receptor established for the Silverwood property. The facility was modeled as an area source with initial dispersion. The effective height of the source and initial dispersion was based on site inspection. Five years of meteorological data representative of the area (based on Dulles Airport) was used along with an area source treatment with initial dispersion to provide a normalized treatment of the transfer core area. Interpretation isopleth overlays onto Google Earth aerial maps showing the concentrations for the 5 foot AGL height for the maximum 1-hour and annual average dilution ratios which is later converted to dilution factors.

Flag pole receptors were used to evaluate the concentration fields and were normalized to 1 gram / sec for the area source footprint for the following heights: 1.5, 4.5, 7.5, 10.5, 13.5 meters above ground level. These elevated heights were run for the Silverwood property and not for the general dilution grids.

For modeling purposes, the following data were estimated based site inspection and follow-up with aerial photography:

Building footprint dimensions at main transfer area = 77543.2 square feet

Building height associated with main transfer area = 35 feet

AERMOD and ISCST3 Modeling and Dilution Results

In order to populate a dilution factor table, the state-of-the-art AERMOD dispersion model was run to compute relative concentrations based on an emission rate of 0.001 grams/square meter/second within a 1 km radius of the facility using 5-years of meteorological off-site data representative of Derwood, Maryland with 1-hour maximum and annual average concentrations computed. The ISCST3 dispersion model was run to compute the normalized concentrations and from the maximum computed concentration, dilution ratios, during the time the odor samples were taken using on-site weather data (wind speed, wind direction, and temperature and calculated atmospheric stability) with special receptors established for the proposed Silverwood property and 7 other odor sampling sites surrounding the trash transfer facility as shown below in Table 2.

Table 2. Odor Sampling Locations

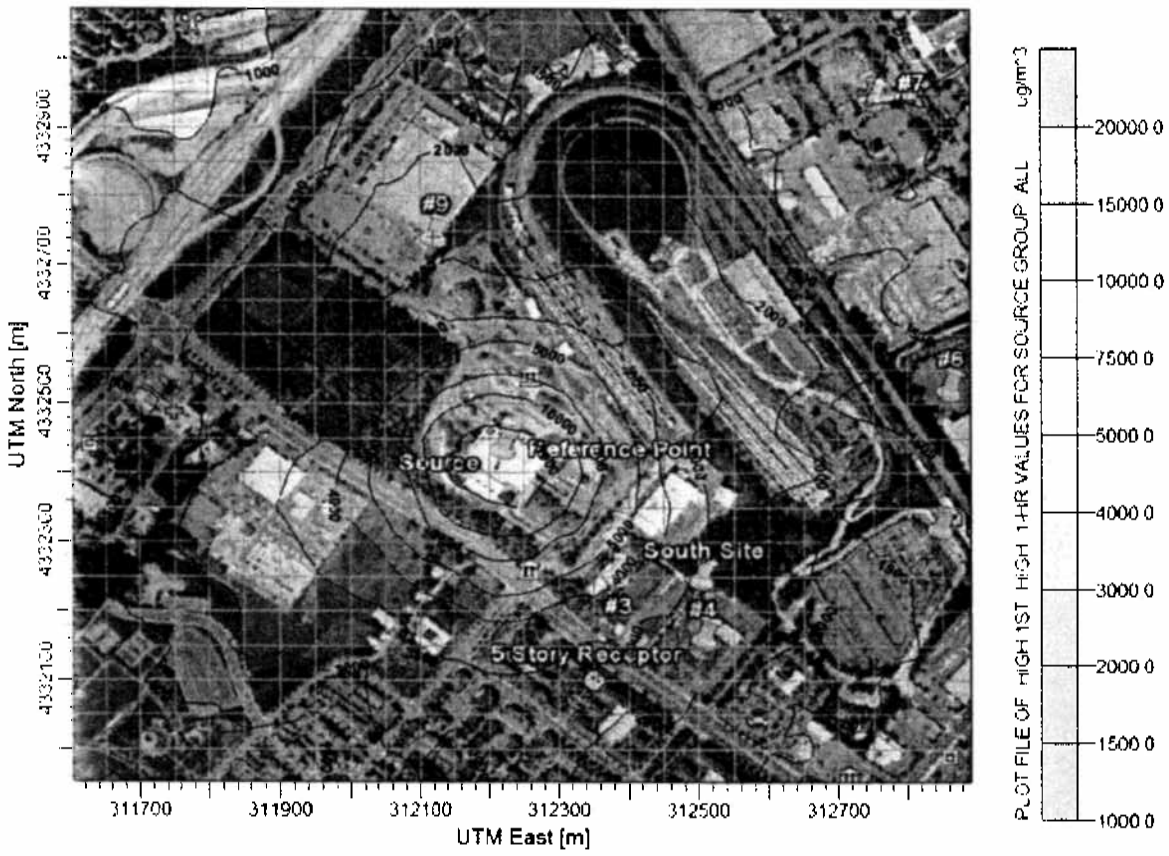
Site Identification	UTM Easting Coordinate	UTM Northing Coordinate
2	312364	4332278
3	312363	4332215
4* Reed Brothers	312482	4332207
5	312826	4332277
6	312843	4332490
7	312742	4332937
5 story building @ reed broths	312485	4332116
9	312119	4332741

AERMOD Modeling Results

The main trash transfer facility building was modeled as an elevated area source at 17.5 feet (half of the estimated height of the building) with initial dispersion of 16.2 ft. The effective height of the source and initial dispersion were based on site inspection. Five years of meteorological data representative of the area (based on Dulles International Airport) were used along with an area source treatment with initial dispersion to provide a normalized treatment of the trash transfer core area. Through interpretation, isopleth concentration overlays were computed and overlaid onto Google Earth aerial maps showing the predicted normalized concentrations for the 5 foot AGL height for the maximum 1-hour and annual average concentrations (see Figures 5-6). In addition, the mulch pile source was modeled as there were two distinct odors detected on-site (the trash odor and the non-offensive mulch odor). Figures 7-8 show the mulch pile modeling results.

Figure 5

Example of 1-Hour Maximum Concentration Isopleths (ug/m^3) based on Normalized Modeling of the Trash Transfer Emissions Source Based on the AERMOD Dispersion Model and Five Years of Analysis[1]



[1] These are normalized concentrations that can be extrapolated to estimate dilution ratios from the source to locations downwind.

Figure 6

Example of Annual Averaged Concentration Isopleths (ug/m^3) based on Normalized Modeling of the Trash Transfer Emissions Source Based on the AERMOD Dispersion Model and Five Years of Analysis

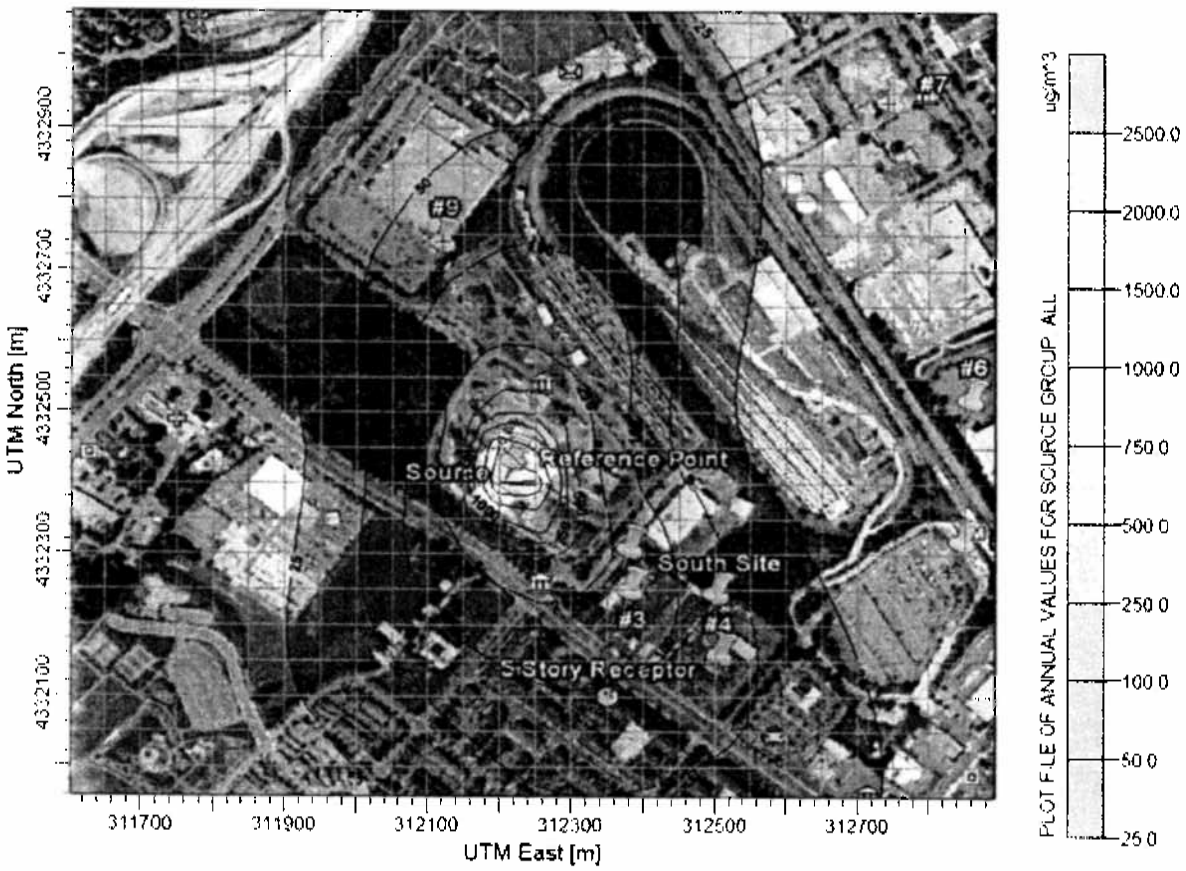


Figure 7

Example of 1-Hour Maximum Concentration Isopleths (ug/m^3) based on Normalized Modeling of the Mulch Pile Emissions Source Based on the AERMOD Dispersion Model and Five Years of Analysis

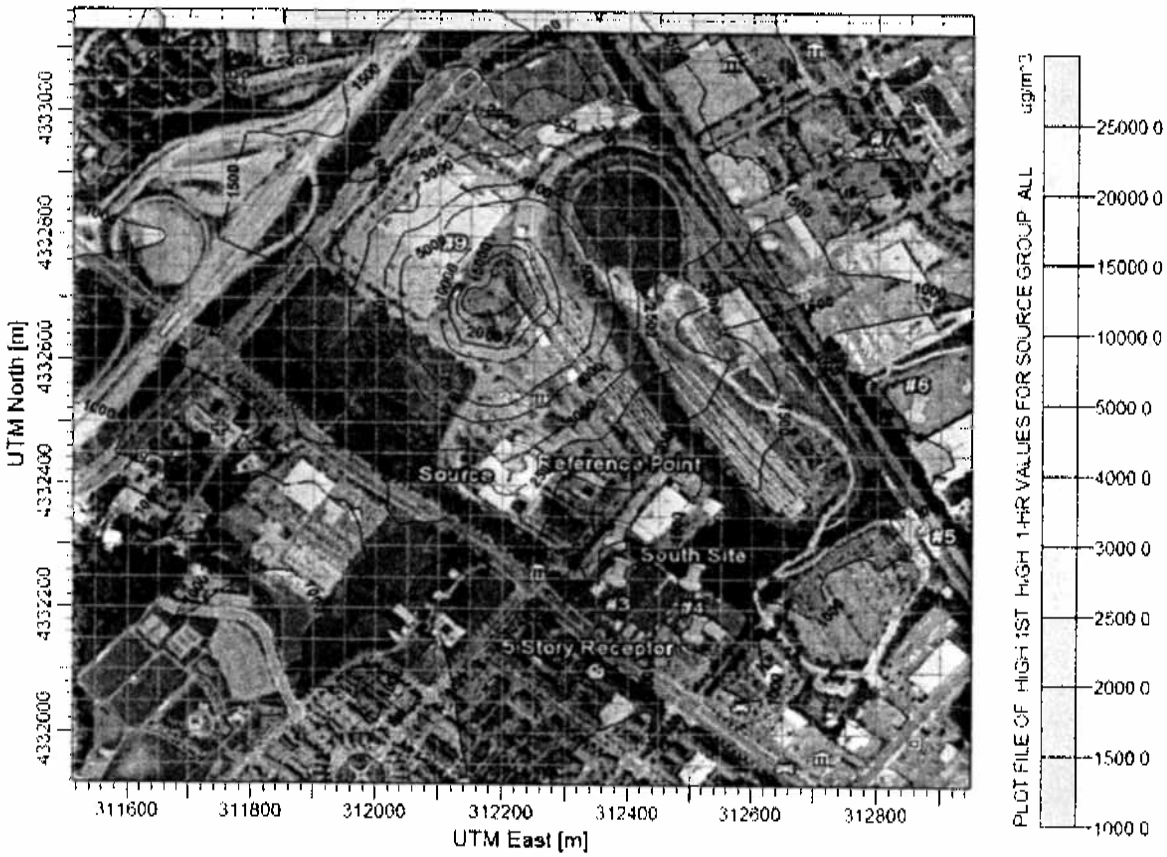
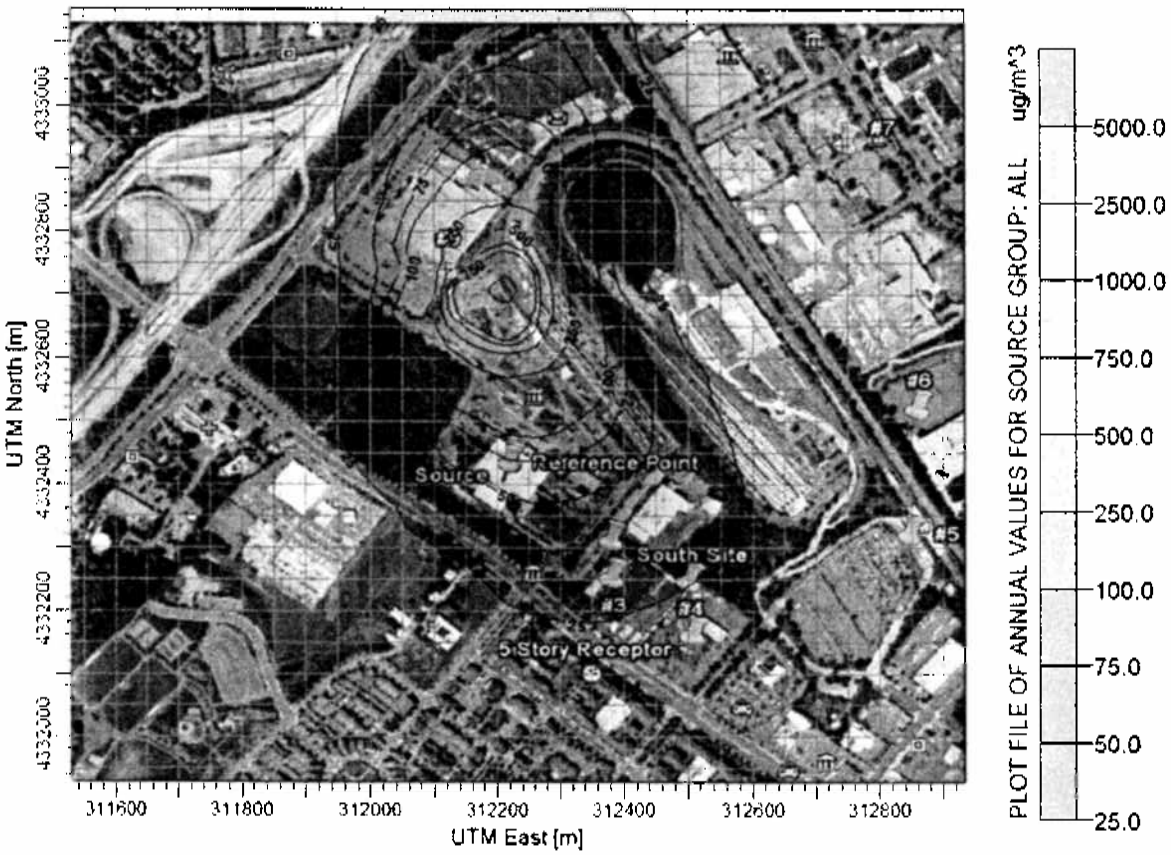


Figure 8

Example of Annual Averaged Concentration Isopleths (ug/m^3) based on Normalized Modeling of the Mulch Pile Emissions Source Based on the AERMOD Dispersion Model and Five Years of Analysis



ISCST3 Modeling Results

Figures 9 and 10 show the ISCST3 modeling concentrations for the actual hours during which the odor sampling occurred on June 9th, 2011. Appendix D shows comparable results for the remaining periods in which bag samples were collected for further analysis by the odor laboratory on June 13th, 2011 on a day with more typical temperatures compared with June 9th that had record high temperatures.

The ISCST3 modeling concentrations for the actual hours during which the odor sampling occurred are shown in Figures 9-10.

The dilution ratios calculated in Table 3 were based on the ratio of the maximum modeled concentration on the receptor grid (located very close and downwind of the source) relative to the modeled concentration at the special receptors. The special receptors included the Silverwood property at each of the 5 floors and the 7 sampling odor sampling locations.

Table 3

Dilution to Maximum Concentration Receptor Ratios

Site	10 am Dilution Factor[2]	2 pm Dilution Factor
Site #7	No Concentration	No Concentration
Site #9	No Concentration	No Concentration
On Site?	4.0	5.5
Site #3	6.8	6.0
Site #4	12.2	24.5
Site #5	1654.8	85150.1
Site #6	No Concentration	No Concentration
New Development 1st Floor	14.4	19.9
New Development 2nd Floor	14.5	19.9
New Development 3rd Floor	14.5	20.0
New Development 4th Floor	14.6	20.1
New Development 5th Floor	14.7	20.3

[2] Dilution factor is how many times the odors would be diluted from the point of leaving the source until reaching the described downwind location,.

Figure 9

Concentrations for 10 AM (June 9th, 2011) For Trash Transfer Operations

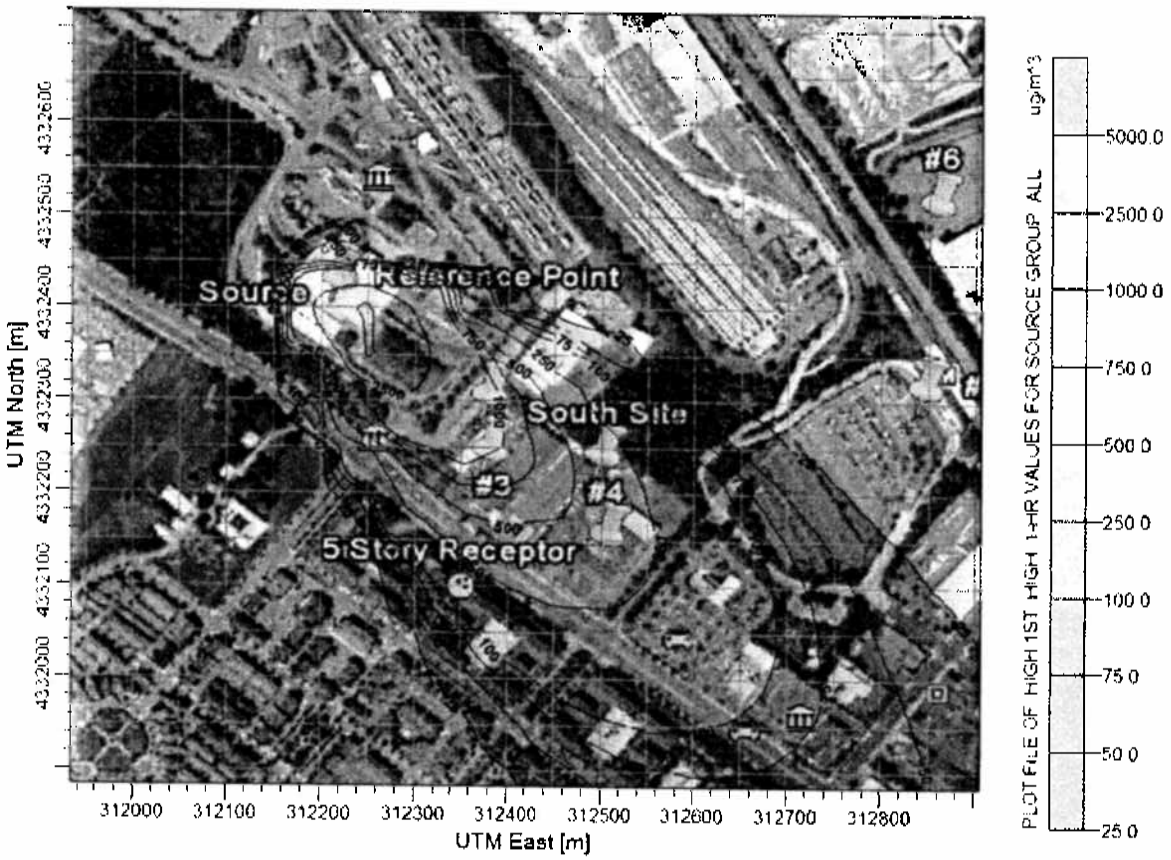
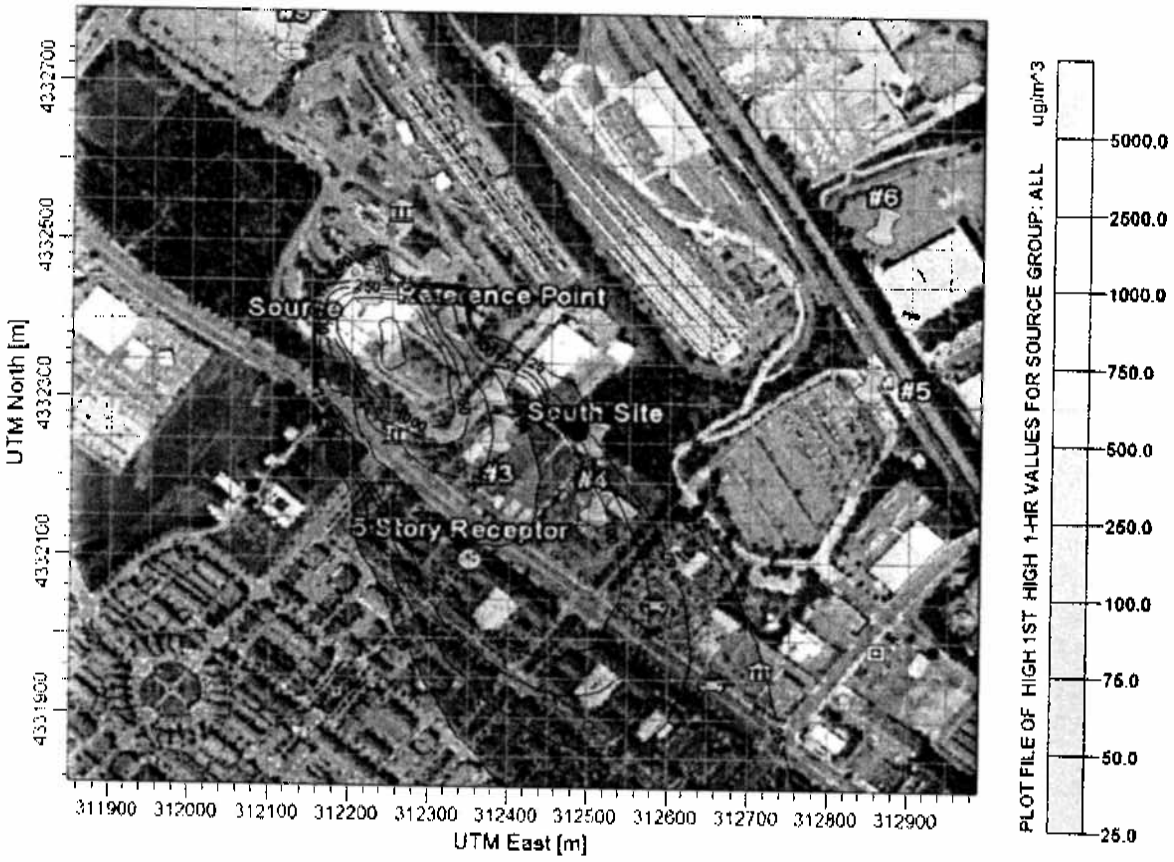


Figure 10

Concentrations for 2 PM (June 9th, 2011) For Trash Transfer Operations



Flag pole receptors were used to evaluate the concentrations fields normalized to 0.001 grams/square meter/sec for the area source footprints for the following heights: 1.5 meters for all receptors and 1.5, 4.5, 7.5, 10.5, and 13.5 meters for the Silverwood property site. These heights accounted for ground level, second story, third story, fourth story, and fifth story exposure levels. Very little difference was noted in dilution ratios as a function of floor at the proposed Silverwood property. This can be attributed to the fact that the peak observed odors were during the commercial operations of the daytime, when dilution was strong and vertical gradients in concentrations (and odors) at this distance from the facility would be expected to be relatively small. Note that for the 10:00 AM example when the wind flow was best aligned downwind of the facility for Site 4 and the proposed structure that there is approximately an additional 20 percent dilution beyond what would be shown at observation site #4 on the upwind edge of the Reed Brothers Dodge property.

Discussion of Results

The odors from the waste transfer facility were detectable at the northwestern edge of the Reed Brothers Dodge property during times when the wind flow was from the northwest. These odors were light. Based on the odor laboratory results, on a scale of -10 (very unpleasant) to +10 (very pleasant), the odors were characterized as approximately neutral, i.e. -0.8 to +0.2, where the -0.8 would be related to the trash odor and the + 0.2 would most likely be related to the mulch odor. Figure 11 provides a summary of the results from the odor laboratory, showing near neutral odors for all samples.

Considering the light odors at the northwest edge of the property, and the further approximately 20 percent dilution between the northwest of the property and the proposed structure, it would not be anticipated that offensive odors would be generally be experienced within the proposed residential structure, if they are detectable at all within the indoor environment. Light odors could be perceived on occasion, but more likely in the outdoor environment because of the transient nature of the odors and the buffering effects of the indoor environment. In addition, based on consideration of distance and expected dilution conditions based on dispersion modeling analysis, it would be expected that the intensity of odor during downwind conditions at the proposed Silverwood property would be less than those that have been experienced during downwind conditions at the current King Farms residential units.

The conclusions described above are based on sampling during three days in June 2011. Two of these three days were record setting in terms of heat (99-100 F). On this basis, it can be expected that the odors during these days of sampling would be greater than would occur during cool weather periods. Any conclusion drawn from this report, however, are based solely on the days in which samples were taken, which obviously are limited and cannot account for all operational conditions at the waste transfer facility.

City of Rockville
Get Into It

111 Maryland Avenue | Rockville, Maryland 20850-2364 | 240-314-5000
www.rockvillemd.gov

October 12, 2011

Mr. Ghassan Khouri
VIKA Incorporated
20251 Century Boulevard, Suite 400
Germantown, Maryland 20874

Re: 15955 Rockville Pike, Development SWM Concept Approval,
Silverwood (a.k.a. Reed Brothers)
SMP2011-00022, STP2011-00091

Dear Mr. Khouri:

The Development Stormwater Management (SWM) Concept received on August 3, 2011, with additional information received between August 25 and October 4, 2011, for the above referenced site is conditionally approved. The project includes a five-story residential building, a multi-level parking garage and associated project infrastructure. The project is located outside of the Rockville City limits however the applicant is seeking to annex the property into the City of Rockville. The 4.37-acre property is in the Rock Creek Watershed and is currently zoned TOMX2, which is a Montgomery County designation. Upon annexation, the property would be zoned MXTD.

The total on-site imperviousness subject to SWM is 2.82 acres. The total imperviousness in the adjacent right-of-way (ROW) subject to SWM is 0.20 acres.

The Pre-Application SWM Concept was approved on June 1, 2011. That concept established a Required Minimum Environmental Site Design Volume (ESDv) of 65 percent.

The submitted Development SWM Concept, as shown on the attached plan entitled "Development Stormwater Management Concept Plan", proposes the following:

Environmental Site Design Measures

- The Development SWM Concept proposes to provide 65 percent of the Required ESDv in the following Environmental Site Design (ESD) measures:
  - Five micro-bioretention facilities with enhanced filters, two of which are located in the east courtyard and,
  - Permeable pavers located in both courtyards and,
  - Green roof over 50 percent of the parking garage portion of the roof.

Structural Measures

- An internal vault located underneath the garage, containing Stormfilter cartridges, is proposed to treat the amount of Wqv and Cpv not treated by any ESD measure. In addition, this vault is sized to provide Wqv and Cpv compensation for on-site impervious areas (0.30 acres) that do not drain to any SWM facility.

Alternative Measures – Monetary Contribution

- Monetary Contribution – Qp10 for the entire on-site imperviousness, approximately 2.82 acres, will be provided by a monetary contribution in lieu of providing on-site SWM.
- Monetary Contribution – Cpv, Wqv and Qp10 for 0.20 impervious acres in the adjacent ROW will be provided by a monetary contribution in lieu of providing on-site SWM.
- The total monetary contribution, based on the current fees, is projected to be approximately $66,800 (2.82 impervious acres x $20,000/acre + 0.20 impervious acres x $52,000/acre).

This Development SWM Concept is approved subject to the following conditions, which must be addressed at the stages in the process as indicated below:

1. Applicant must correct and resubmit the previously submitted safe conveyance study to DPW. The study must be approved by DPW prior to the submission of any detailed engineering plans to DPW, such as sediment control (SC) or SWM. The study will be used to determine compliance with aspects of City law governing safe and non-erosive conveyance of runoff. Current information indicates that the existing outfall pipe traverses two adjacent properties but this must be confirmed by the Applicant. The study shall be conducted to the limits of Section A-A as shown on the previously submitted safe conveyance study. The revised study shall be prepared using field run cross sections and observations if access to the properties is granted by the property owners. If access is not granted then the study must utilize the best available information.

    a. If, after review of the safe conveyance study, the City determines that the 10 year post-development runoff from the existing storm drain pipe from the Applicant's property is safely conveyed the Applicant must:

        i. In accordance with the City of Rockville best practices, make a good faith effort, at his own expense, to obtain private storm drain easements from the adjacent property owners due to the existence of the outfall pipe on their property. At a minimum the easements must address long term access and maintenance. The easements must be recorded in the Montgomery County land records prior to SWM or SC permit issuance. However, the

Applicant will be allowed to continue use of the existing storm drain outfall, without easements, provided both the volume and velocity associated with the 10-year storm event decreases from existing condition to the developed condition.

b. If, after review of the safe conveyance study, the City determines that the 10 year post-development runoff is not safely conveyed, the Applicant may be required to mitigate impacts in order to establish safe conveyance which may include:
   i. Obtaining necessary permission, plan approvals, permits and easements for off-site mitigating measures prior to DPW's approval of either the sediment control or stormwater management plans.
   ii. Redesigning some or all aspects of previously approved elements of the plan which may include approvals from other City Departments (i.e. Planning, Forestry and Fire Marshal) and other agencies having jurisdiction. Redesign affecting any aspects of the Development Stormwater Management Concept and Site Plan may require a revision and resubmission of the Concept at DPW's sole discretion and may negate previously established minimums. Agencies that are not currently impacted by the submitted Development SWM Concept Plan and Site Plan may be required to issue approvals and permits not currently anticipated and may require upgrades to their systems (i.e. MSHA). In addition, off site easements may be required.
   iii. Provide Qp10 management on-site.

2. If the Applicant demonstrates that safe conveyance is achieved, the Applicant shall make a monetary contribution to the City Stormwater Fund as a SWM Alternative to providing Qp10 management on-site for the portion of the site that does not drain to an on-site SWM measure. At the rate of $20,000 per impervious acre, the fee-in-lieu is estimated to be $56,400. The impervious area used to calculate the monetary contribution will be determined at final engineering and will be based on the fees at that time. Payment of the monetary contribution is required prior to the DPW Stormwater Management Permit (SMP) issuance. If the Applicant fails to demonstrate that safe conveyance is achieved and if the Applicant elects to provide full Qp10 management on-site, then no monetary contribution is required.

3. The Applicant must provide the City with a Hold Harmless Agreement, in a form acceptable to the City Attorney, releasing the City from all costs and liability associated with conveyance of this property's on-site stormwater runoff through or onto adjacent properties. The Agreement must be recorded in the Montgomery County land records, prior to the issuance of any DPW permits for this project.

4. Applicant shall make a monetary contribution to the City Stormwater Fund as a SWM Alternative to providing Cpv, WQv and Qp10 management for the portion of the adjacent ROW (Frederick Road – MD RTE 355) that does not drain to a SWM measure. At the rate of $52,000 per impervious acre, the fee-in-lieu is estimated to be $11,440. The impervious area used to calculate the monetary contribution will be determined at final engineering and

will be based on the fees at that time. Payment of the monetary contribution is required prior to SMP issuance.

5. Unless negated by a redesign of the project as outlined above, submit a SMP permit application, application and plan review fee, detailed SWM Plans and computations signed and sealed by a Professional Engineer (PE) licensed in the state of Maryland for review and approval by DPW. The submitted material must:

    a. Demonstrate compliance with the attached Development SWM Concept Plan including locations, types and sizing of ESD measures. ESD to the MEP for this project has been established at 65 percent of the required ESDv.
    b. Show how roof runoff will safely bypass micro-bioretention facilities once the volume required to be treated is reached for the ten year event. The project design must include measures that demonstrate and prevent flooding of the courtyards during the 100 year storm event.
    c. Demonstrate that all components of the SWM system drain by gravity. Pumping of stormwater will not be permitted.
    d. Include a Landscape Plan with appropriate tables, details and notes, sealed by a Registered Landscape Architect (RLA), for all non-structural ESD measures that utilize plant materials (i.e. micro-bioretention and green roof). Please note that Rockville requires that each plan sheet be sealed by only one professional so the PE's seal cannot be on the same sheet containing the design elements that are sealed by the RLA.
    e. Include micro-bioretention, green roof and permeable paver typical sections for review and approval during detailed engineering.
    f. Include structural drawings with appropriate details and notes, sealed by a qualified PE for the underground vault and retaining walls associated with micro-bioretention facilities. Please note that the City of Rockville requires that each plan sheet be sealed by only one PE. Therefore the structural components cannot be on the same sheet as other SWM facilities unless the same engineer seals both aspects of the design.
    g. Include information that demonstrates that the sub-drainage areas are safely conveyed to the ESD measures and the underground vault.
    h. Include the design, construction specifications, plant media depth, plant media specifications, planting schedule with types, sizes and quantities of planting material for green roofs and micro-bioretention. If a proprietary green roof system is being utilized, all green roof design elements, including specifications, must be submitted and must be sealed by a PE licensed in the state of Maryland. The loading computations for the green roof and the method for strapping the system to the roof must be provided by a qualified professional and must be approved by the Inspection Services Division in conjunction with their review of the Building Permit. Evidence of that approval must be provided to DPW prior to approval of the SWM plan.
    i. Include a SWM Database Sheet (available at DPW).

6. Post financial security based on the approved SWM construction estimate in a format acceptable to the City Attorney. Approval, which is coordinated through DPW staff, is required prior to SMP issuance.

7. Submit a SWM Easement, Inspection and Maintenance Agreement (Agreement) signed by the property owner for review and approval by DPW and the City Attorney's Office. The approved Agreement must be recorded in the Montgomery County land records prior to SMP permit issuance. Access routes to all aspects of the SWM facilities will be determined in conjunction with final engineering review and must be addressed in the SWM Agreement.

8. All easements related to the existing SWM system to be removed as part of this project must be legally abandoned prior to Sediment Control Permit (SCP) issuance.

9. Obtain approval of a Forest Conservation Plan (FCP) from the City Forester prior to DPW issuance of SMP and SCP permits.

Any significant modification, revisions or alterations to the approved types, methods, locations and sizes of SWM measures approved with this SWM Concept may result in the requirement to submit a revised SWM Concept for approval by DPW.

This SWM approval does not infer or supercede other required project approvals and is contingent upon meeting all other requirements including, but not limited to, forestry, traffic and transportation, planning, Washington Suburban Sanitary Commission, and Maryland State Highway Administration.

If you have any questions, please contact Becky Andrus, of my staff, via e-mail at bandrus@rockvillemd.gov or via telephone at 240-314-8519.

Sincerely,

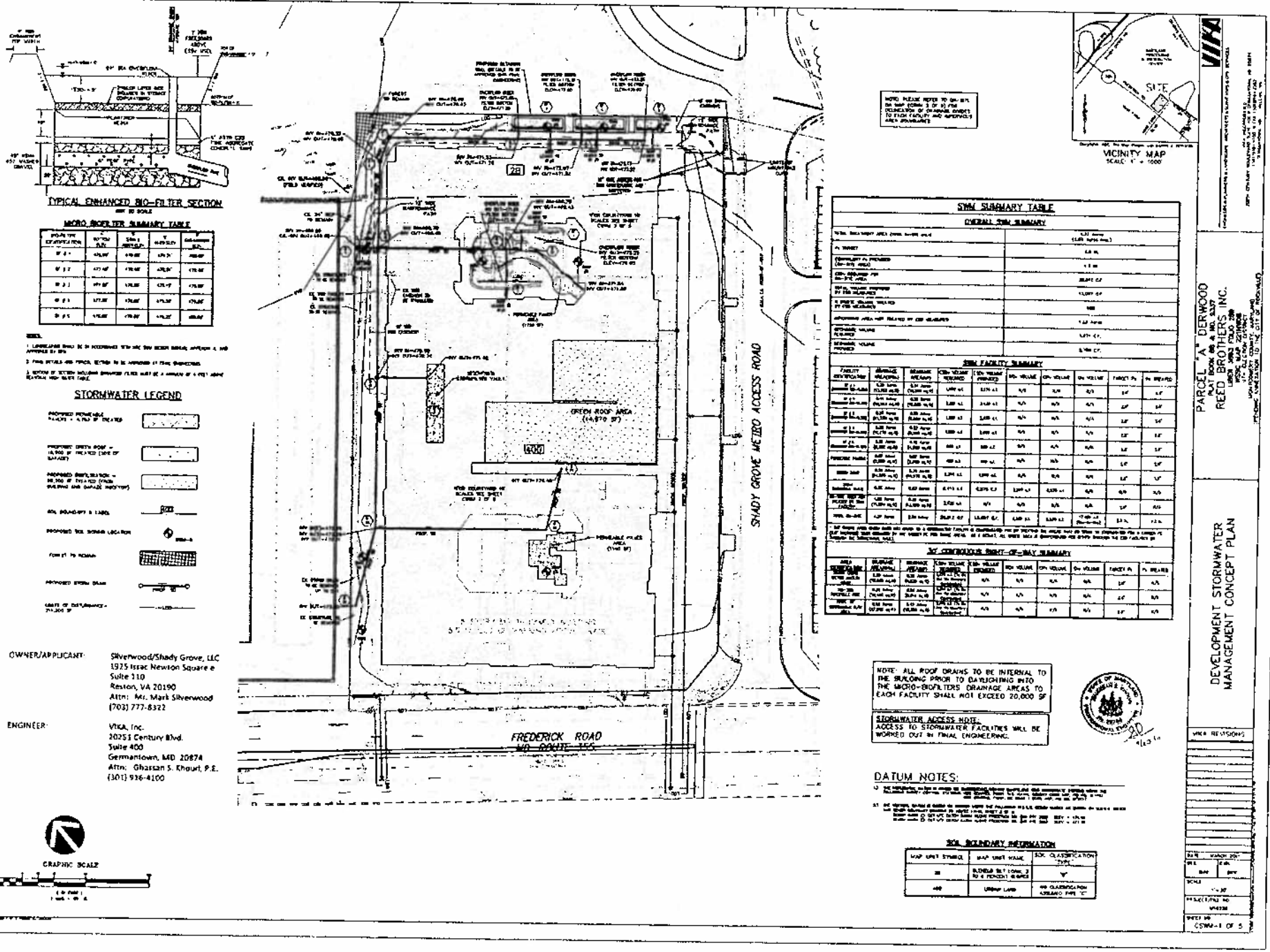
Susan T. Straus, PE
Chief of Engineering

STS/MMF/BA/kmc

Attachments: Development Stormwater Management Concept Plan, received September 21, 2011

cc: Mark Silverwood, Silverwood/Shady Grove, LLC
Patricia Harris, Lerch Early Brewer
Marcy Waxman, Senior Assistant City Attorney
Jim Wasilak, Chief of Planning
Courtney Morgan, Chief of Inspection Services
Jeremy Hurlbutt, Planner III
Elise Cary, Assistant City Forester
Mark Wessel, Engineering Supervisor
Mary Fertig, Civil Engineer III
Becky Andrus, Civil Engineer I
SWM Concept file
Permit plan
Day file

Attachment 12



City of Rockville

Commercial Green Building Checklist
New Construction and Major Renovations (based on LEED® 2009 version)

Project Name: Reed Brothers at Shady Grove
Project Address: Fredrick Road
Rockville, Maryland

LEED AP Name: Kristy Nachman
LEED AP Signature:
Green Building Case #: GRB -

This checklist is designed to support the compliance of commercial projects with Rockville's Green Building Regulations, Article XIV of Chapter 5 of the City Code, "Buildings and Building Regulations". Inspections and verification of LEED points will be administered by the City throughout development plan review (via DRC), building plan review (via ISD), and construction field inspection. Per Section 5-324, projects must achieve at least 25 points with at least 5 points earned from a list of Rockville priority credits (identified by *).

Total Points Attempted (25 pts required) = 27
*** Total Rockville Priority Points (5 required) =** 5

Submittal Phase	Responsible Party	Credit Number	Credit Name and Required Submittal Documentation	Points Available	Applicant		City Staff Approval Date		
Development Plan Review or Construction Plan Review	Owner/ Design Team/ Contractor		(Documentation to be submitted during Development Plan Review or Building Construction Plan Review)		Enter Points Attempted (#)	Enter Submittal Date	Planning	ISD	Final Inspection
SUSTAINABLE SITES				26	17				
D	O or DT	SS Credit 1	**Site Selection**	1	1				
			Exhibit confirming that project has met the following requirements: Not on prime farmland; not on previously undeveloped land that is below 5 feet above the 100 year flood elevation per FEMA; not on habitat for any endangered or critical species; not within 100 feet of any wetlands; not within 50 feet of water body; and not on public parkland.		Notes:	See attached documentation			
D	O or DT	SS Credit 2	**Development Density and Community Connectivity**	5	5				
			Option 1: Development Density- include an exhibit showing the site, adjacent buildings, and the development density radius. Calculate the development density for the project by dividing the total square footage of the buildings by the total site area in acres. The development density must be 60,000 sq.ft. or more per acre. Calculate the density radius and then the average property density within the density boundary. **Option 2:** Community Connectivity- include an exhibit with an aerial photo of a 1/2 mile radius around the building entrance and the location of 10 basic services. List each business name and type for service. Show residential zone or neighborhood near building with a minimum density of 10 units per acre.		Notes:	Option 2 - See attached documentation			
D/C	O or DT	SS Credit 3	**Brownfield Redevelopment**	1	0				
			Provide verification from the Maryland Department of the Environment that the site was a brownfield site and mitigation was completed in accordance with State and Federal regulations.		Notes:				
D	O or DT	SS Credit 4.1	**Alternative Transportation - Public Transportation Access**	6	6				
			Option 1: Provide an exhibit that illustrates the main building entrance is within 1/2 mile *walking distance* from commuter rail (Metro). **Option 2:** Provide an exhibit that illustrates the main building entrance is within 1/4 mile *walking distance* of 1 or more stops for 2 public bus lines.		Notes:	Option 1 - See attached documentation			
D	O or DT	SS Credit 4.2	**Alternative Transportation - Bicycle Storage & Changing Rooms**	1	1				
			Commercial or Institutional Projects: Provide an exhibit with bicycle racks for 5% of FTE within 200 yards of building entries and a floor plan showing the location of changing rooms and showers for 0.5% of the FTE. **Residential Projects:** Provide an exhibit with covered storage facilities for securing bicycles for 15% of building occupants.		Notes:	See attached documentation			

Submittal Phase (Development Plan Review or Construction Plan Review)	Responsible Party (Owner/ Design Team/ Contractor)	Credit Number	Credit Name and Required Submittal Documentation (Documentation to be submitted during Development Plan Review or Building Construction Plan Review)	Points Available	Applicant: Enter Points Attempted (#)	Applicant: Enter Submittal Date	City Staff Approval Date: Planning	City Staff Approval Date: ISD	City Staff Approval Date: Final Inspection
D	O or DT	SS Credit 4.3	**Alternative Transportation - Low Emission and Fuel Efficient Vehicles**	3	3				
			Site plan with narrative and supporting information (FTE, locations, etc.) for one of the following : **Option 1:** Provide preferred parking for low-emitting and fuel efficient vehicles for 5% of the total vehicle parking capacity of the site. **Option 2:** Install alternative-fuel refueling stations for 3% of total vehicle parking capacity of the site. **Option 3:** Provide low-emitting and fuel efficient vehicles for 3% of FTE occupants and provide preferred parking for these vehicles. **Option 4:** Provide building occupants access to a low-emitting or fuel-efficient vehicle sharing program.		Notes: Option 1 - See attached documentation				
D	O or DT	SS Credit 4.4	**Alternative Transportation - Parking Capacity**	2	0				
			An exhibit and narrative with supporting information (# FTE, locations, etc.) for one of the following: **Non-Residential Option 1:** Do not exceed local parking requirements. Provide location and number of preferred carpool parking for 5% of total parking spaces. **Non-Residential Option 2:** Provide parking for less than 5% of FTE building occupants and van pool or carpool parking (marked as such) for 5% of total parking spaces. **Residential Option 1:** Do not exceed local parking codes and support programs such as car-share and side-share services. **Mixed Use Option 1:** Mixed-use buildings with less than 10% commercial area must adhere to residential requirements. for mixed-use buildings with more than 10% commercial area, the residential area must adhere to the residential requirements and the commercial area must adhere to non-residential requirements. **ALL Projects:** Provide no new parking.		Notes:				
D	DT (Civil or LA)	* SS Credit 5.1	**Site Development - Protect or Restore Habitat**	1	0				
			Exhibit showing the locations and areas of the building, grading, boundaries, and pervious development that meet one of the following requirements: **Greenfield site:** Limit all site disturbances to 40 ft beyond building perimeters; 10 ft beyond surface parking, walkways, patios and utilities less than 12 inches in diameter; 15 ft beyond primary roadway curbs and utility trenches; 25 ft beyond constructed areas with permeable surfaces, stormwater detention facilities, and playing fields. **Previous developed sites:** Restore or protect a minimum of 50% of the site landscaped area with native vegetation or 20% of the total site area (including building footprint).		Notes:				
D	DT (Civil or LA)	* SS Credit 5.2	**Site Development - Maximize Open Space**	1	0				
			Exhibit showing the locations and areas that meet one of the following requirements: **Local code has open space requirements:** Open space should exceed the local code by 25%. **No local zoning requirement:** Open space is equal to building footprint. **Local zoning ordinance but no open space requirements:** provide vegetated open space equal to 20% of the project's area.		Notes:				

Submittal Phase (Development Plan Review or Construction Plan Review)	Responsible Party (Owner/ Design Team/ Contractor)	Credit Number	Credit Name and Required Submittal Documentation (Documentation to be submitted during Development Plan Review or Building Construction Plan Review)	Points Available	Applicant: Enter Points Attempted (#)	Applicant: Enter Submittal Date	City Staff Approval Date: Planning	City Staff Approval Date: ISD	City Staff Approval Date: Final Inspection
D	DT (Civil or LA)	* SS Credit 6.1	**Stormwater Design - Quantity Control**	1	0				
			Sites with existing imperviousness 50% or less **Option 1:** As part of the SWM plan submission, verify that the post-development peak discharge rate and quantity does not exceed the pre-development peak discharge rate and quantity for the 1 and 2-year and 24-hour design storms. **Option 2:** As part of the SWM plan submission, include stream channel protection and quantity control strategies that protect receiving stream channels from excessive erosion. **Sites with existing imperviousness greater than 50%** As part of the SWM plan submission, verify that the plan results in a 25% decrease in the volume of stormwater runoff from the 2-year 24-hour design storm.		Notes:				
D	DT (Civil or LA)	* SS Credit 6.2	**Stormwater Design - Quality Control**	1	0				
			As part of the SWM plan submission, verify that stormwater runoff from 90% of the average annual rainfall is captured or treated such that 80% of the average annual post-development total suspended solids is removed. For non-structural controls, list BMPs and describe the contribution of each to stormwater filtration and the percent of annual rainfall treated by each BMP. For structural controls, list the pollutant removal performance of each measure and the percentage of annual rainfall treated by each structure.		Notes:				
D	DT	* SS Credit 7.1	**Heat Island Effect - Non-Roof**	1	1				
			Exhibit showing the locations and areas that meet one of the following options: **Option 1:** Provide any combination of the following for 50% of site hardscape (including roads, sidewalks, courtyards & parking): a. Shade from landscaping (within 5 years of occupancy) b. Shade from structures covered by solar panels c. Shade from architectural devices or structures with a SRI of at least 29. b. Hardscape materials with a SRI of at least 29. c. Open grid pavement system (at least 50% impervious) **Option 2:** Site plan that shows 50% of parking is covered or in a parking garage. Roof used to cover parking must have a SRI of at least 29, be vegetated, or covered with solar panels.		Notes: Option 2 - See attached documentation				
D/C	DT (Architect)	* SS Credit 7.2	**Heat Island Effect - Roof**	1	0				
			Roof drawings and SWM plans identify roof products, areas, SRI values, and slopes that meet one of the following options: **Option 1:** 75% of roof materials to be: SRI 78 for a low sloped roof (= < than 2:12); or SRI 29 for a steep sloped roof (> than 2:12) **Option 2:** Vegetated roof covers 50% of roof area. **Option 3:** Combination of 1&2 (Area of SRI roof/0.75) + (Area of vegetated roof/.05) is greater than total roof area		Notes:				
D/C	DT	SS Credit 8	**Light Pollution Reduction**	1	0				
			Project complies with 1 of the 2 options for interior lighting AND the requirements for exterior lighting. COMPLETE TEMPLATE SS C8		Notes:				

Attachment 1

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WATER EFFICIENCY				**10**	**0**				
D	DT (LA)	WE Credit 1	**Water Efficient Landscaping**	2-4	0				
			Option 1: Reduce by 50%	2	Notes:				
			Option 2: No potable water Used for irrigation	4	See attached documentation				
			COMPLETE TEMPLATE WE C1						
C	DT (MEP)	* WE Credit 2	**Innovative Wastewater Technologies**	2	0				
			Option 1: Reduce potable water use for building sewage conveyance by 50%.		Notes:				
			Option 2: Treat 50% of wastewater on-site						
			COMPLETE TEMPLATE WE C2						
C	DT (MEP)	* WE Credit 3	**Water Use Reduction**	2-4	0				
			Reduce by 30%	2	Notes:				
			Reduce by 35%	3					
			Reduce by 40%	4					
			COMPLETE TEMPLATE WE C3						
ENERGY & ATMOSPHERE				**35**	**2**				
C	DT (MEP)	* EA Credit 1	**Optimize Energy Performance**	1-19	2				
			Option 1: Whole Building Energy Simulation Model demonstrating percentage improvement compared to ANSI/ASHRAE/IESNA Standard 90.1-2007 (with errata but without addenda)	1-19	Notes:				
			Option 2: Demonstrate compliance with Prescriptive Compliance Path (ASHRAE Advanced Energy Design Guide)	1					
			Option 3: Demonstrate compliance with Prescriptive Compliance Path: Advanced Buildings Core Performance Guide	1-3					
C	DT (MEP)	* EA Credit 2	**On-Site Renewable Energy**	1-7	0				
			Provide documentation that on-site renewable energy systems offset building energy use costs by 1% to 13%. Renewable energy systems include solar thermal, photovoltaic, wind, biofuel-based electric, geothermal heating or electric (not ground-source heat pumps).		Notes:				
C	DT (CxA)	EA Credit 3	**Enhanced Commissioning**	2	0				
			The Commissioning Agent (CxA) provides documentation that the commissioning process meets the necessary requirements and milestones for the following energy related systems: HVAC&R, lighting and daylight controls, domestic hot water, renewable energy systems. **NOTE:** If this credit is used to meet the 25 points required by Article XIV, Green Building Regulations, then commissioning **must be completed prior to receiving OCCUPANCY APPROVAL** from the City of Rockville Inspection Services Division.		Notes:				
C	DT (MEP)	EA Credit 4	**Enhanced Refrigerant Management**	2	0				
			Option 1: Demonstrate that refrigerants are not used.		Notes:				
			Option 2: Demonstrate that refrigerants and HVAC&R minimize or eliminate the emission of CFC's or HCFC's. Total retrigerant impact per ton is equal to or less than 100. Do not operate or install fire suppression systems that contain ozone-depleting substances, such as CFCs, HCFCs, or halons.						
C	DT (MEP)	EA Credit 5	**Measurement & Verification**	3	0				
			Option 1: Develop and implement a measurement and verification (M&V) plan consistent with IPMVP Option D: Calibrated Simulation (Savings Estimation Method 2).		Notes:				
			Option 2: Develop and implement a measurement and verification (M&V) plan consistent with IPMVP Option B: Energy Conservation Measure Isolation.						
C	O or DT	* EA Credit 6	**Green Power**	2	0				
			Provide copy of a contract with a Green-e certified Renewable Energy Provider or accredited renewable energy certificates (RECs) for a minimum of 2 years and 35% of the building's annual electricity power consumption. Determine baseline electricity use using: consumption can be based on the results of EAC1 or estimated with the Commercial Buildings Energy Consumption Survey database.		Notes:				
			Option 1: Annual electricity consumption from EA Credit 1: Optimize Energy **Option 2:** The US Department of Energy's Commercial Buildings Energy Consumption Survey database						

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MATERIALS AND RESOURCES				**14**	**2**				
C	DT (Architect)	* MR Credit 1.1	**Building Reuse - Maintain Existing Walls, Floors, and Roof**	1-3	0				
			Documentation confirming the building element ID, location, existing area, reused area and percentage of all major existing structural and envelope elements. Calculation excludes nonstructural roofing, window assemblies, structural and envelope materials that are deemed structurally unsound, hazardous, or that pose a contamination risk. **NOTE:** This credit is not available to projects that include additions that are more than twice the square footage of the existing building.		Notes:				
			Reuse 55%	1					
			Reuse 75%	2					
			Reuse 95%	3					
C	DT (Architect)	MR Credit 1.2	**Building Reuse - Maintain Interior Nonstructural Elements**	1	0				
			Documentation confirming that at least 50% (by area) of existing nonstructural elements (e.g., interior walls, doors, floor coverings, ceiling systems) are reused in the completed building. Include table with building element ID, location, total area, reused area, and percentage reused.		Notes:				
C	C	* MR Credit 2	**Construction Waste Management (1 to 2 points):**	1-2	2				
			Divert 50% from disposal	1	Notes:				
			Divert 75% from disposal	2					
			COMPLETE TEMPLATE MR C2						
C	DT (Architect)	MR Credit 3	**Materials Reuse**	1-2	0				
			Reuse 5% (based on cost)	1	Notes:				
			Reuse 10% (based on cost)	2					
			COMPLETE TEMPLATE MR C3						
C	DT and C	MR Credit 4	**Recycled Content**	1-2	0				
			10% (post-consumer + 1/2 pre-consumer) (based on cost)	1	Notes:				
			20% (post-consumer + 1/2 pre-consumer) (based on cost)	2					
			COMPLETE TEMPLATE MR C4						
C	DT and C	MR Credit 5	**Regional Materials**	1-2	0				
			10% (extracted, processed & manufactured w/in 500 miles) (based on cost)	1	Notes:				
			20% (extracted, processed & manufactured w/in 500 miles) (based on cost)	2					
			COMPLETE TEMPLATE MR C5						
C	DT and C	MR Credit 6	**Rapidly Renewable Materials**	1	0				
			2.5% of materials and products (based on cost)		Notes:				
			COMPLETE TEMPLATE MR C6						
C	DT and C	MR Credit 7	**Certified Wood**	1	0				
			50% of wood-based materials and products certified by FSC (based on cost)		Notes:				
			COMPLETE TEMPLATE MR C7						

Submittal Phase	Responsible Party	Credit Number	Credit Name and Required Submittal Documentation	Points Available	Applicant		City Staff Approval Date		
Development Plan Review or Construction Plan Review	Owner/ Design Team/ Contractor		(Documentation to be submitted during Development Plan Review or Building Construction Plan Review)		Enter Points Attempted (#)	Enter Submittal Date	Planning	ISD	Final Inspection
INDOOR ENVIRONMENTAL QUALITY				**15**	**5**				
C	DT (MEP)	IEQ Credit 1	**Outdoor Air Delivery Monitoring**	1	0				
			Building plans verify that a permanent CO2 monitoring system is installed that provides feedback on ventilation system performance to ensure that ventilation systems maintain design minimum ventilation requirements. The system is also configured to generate an alarm when conditions vary by 10% or more from set point. Include airflow monitors and CO2 sensors into floor plans, schematics, elevations, and mechanical schedules. Provide narrative describing the project's ventilation design and CO2 monitoring system.		Notes:				
C	DT (MEP)	IEQ Credit 2	**Increased Ventilation**	1	0				
			Building plans verify that the design exceeds breathing zone outdoor air ventilation rates to all occupied spaces by at least 30% above the minimum rates required by ASHRAE Standard 62.1-2007 (with errata but without addenda).		Notes:				
C	C	IEQ Credit 3.1	**Construction IAQ Management Plan - During Construction**	1	0				
			Submit a copy of the project's Construction Indoor Air Quality (IAQ) Management Plan that is developed in accordance with the recommended Design Approaches of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines for Occupied Buildings Under Construction, 2nd Edition 2007, ANSI/SMACNA 008-2008 (Chapter 3). During construction, protect stored on-site and installed absorptive materials from moisture damage. For all permanently installed air handlers that are used during construction, verify that MERV 8 filtration media are used and replaced prior to occupancy.		Notes:				
C	C	IEQ Credit 3.2	**Construction IAQ Management Plan - Before Occupancy**	1	0				
			Submit a copy of the project's Construction Indoor Air Quality (IAQ) Management Plan highlighting the pre-occupancy phase practices and provide verification of one of the following: **Option 1a:** Building Flush-out prior to Occupancy: Prior to occupancy and after all interior finishes are installed, perform a building flush-out by supplying a total air volume of 14,000 cu.ft. of outdoor air per sq.ft. of floor area while maintaining an internal temperature of at least 60 degrees F and relative humidity no higher than 60%. **Option 1b:** Building Flush-out with Early Occupancy: Prior to occupancy and after all interior finishes are installed, perform a building flush-out by supplying a total air volume of 3,500 cu.ft. of outdoor air per sq.ft. of floor area. Once the space is occupied, it must be ventilated at a min. rate of 0.30 cfm/ft2 or the design min. outside air rate. During each day of flush out, ventilation must occur for a minimum of three-hours prior to occupancy until a total of 14,000 ft3/ft2 of outside air has been delivered to the space. **Option 2:** Indoor Air Quality (IAQ) Testing: Provide copies of the project's IAQ testing report that is consistent with the EPA's Compendium of Methods for the Determination of Air Pollutants in Indoor Air. Demonstrate that the contaminant maximum concentration levels are not exceeded.		Notes:				
C	DT and C	IEQ Credit 4.1	**Low-Emitting Materials - Adhesives & Sealants**	1	0				
			Adhesives, sealants, and sealant primers comply with the South Coast Air Quality Management District Rule #1168 and aerosol adhesives comply with the Green Seal Standard for Commercial Adhesives GS-36. COMPLETE TEMPLATE EQ C4.1		Notes:				
C	DT and C	IEQ Credit 4.2	**Low-Emitting Materials - Paints & Coatings**	1	1				
			Paints and coatings applied within the weatherproofing system comply with the appropriate standards: -Architectural paints do not exceed the VOC limits of Green Seal Standard GS-11, Paints, 1st Edition, May, 1993 -Anti-corrosive and anti-rust paints do not exceed 250 g/L established by Green Seal Standard GC-03, Anti-Corrosive Paints, 2nd Edition, January 7, 1997. -Clear wood finishes, coatings, stands, primers, and shellacs do not exceed the VOC limits established by the South Coast Air Quality Management District Rule 1113, Architectural Coatings, rules in effect on January 1, 2004. COMPLETE TEMPLATE EQ C4.2		Notes:				

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C	DT and C	IEQ Credit 4.3	**Low-Emitting Materials - Flooring Systems**	1	1				
			Option 1: All flooring must comply with appropriate standards: -Carpets must comply with the Carpet and Rug Institute Green Label Plus program. -Carpet cushions comply with the Carpet and Rug Institute Green Label program. -Carpet adhesive comply with IEQ Credit 4.1, with a 50 g/L VOC limit. -Hard surface flooring must be certified as compliant with FloorScore standards. -Concrete, wood, bamboo and cork floor finishes such as sealer, stain, and finishes meet the requirements of South Coast Air Quality Management District, Rule 1113, Architectural Coatings, rules in effect on January 1, 2004. -Tile setting adhesives and grout meet the South Coast Air Quality Management District Rule 1168. **Option 2:** All flooring elements installed in the building interior must meet the requirements of the CA Department of Health Services Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers. COMPLETE TEMPLATE EQ C4.3		Notes:				
C	DT and C	IEQ Credit 4.4	**Low-Emitting Materials - Composite Wood and Agrifiber Products**	1	0				
			Composite wood and agrifiber products (particleboard, medium density fiberboard (MDF), plywood, wheatboard, strawboard, panel substrates and door cores) used inside the weather-proofing system contain no added urea-formaldehyde resins. Laminating adhesives used to fabricate on-site and shop-applied composite wood and agrifiber assemblies do not contain added urea-formaldehyde resins. COMPLETE TEMPLATE EQ C4.4		Notes:				
C	DT (Architect)	IEQ Credit 5	**Indoor Chemical & Pollutant Source Control**	1	0				
			Building plans demonstrate compliance with all of the following requirements: -All regular points of entry have permanent entryway systems (grates, grills, and slotted systems; roll-out mats or carpet systems) of at least 10 feet long to capture dirt and particulates. Tables provide system manufacturer, model ID, system description, and how roll up or carpet systems will be maintained weekly by a contracted service organization. - All areas where hazardous gases and/or chemicals are present/used are identified and have specifications that each room is designed to be fully sealed from adjacent spaces and have an exhaust system that provides sufficient negative pressure within the room. Details of deck-to-deck partitions or hard-lid conditions and negative pressure calculations are provided for each chemical use area room. - All mechanical ventilation filtration for air handling units/ventilators serving occupied areas have been supplied with MERV 13 (or better) air filter prior to occupancy. Filtration is applied to process both return and outside air that is delivered as supply air. - Provide containment for appropriate disposal of hazardous liquid wastes in places where water and chemical concentrate mixing occurs.		Notes:				
C	DT (MEP)	IEQ Credit 6.1	**Controllability of Systems - Lighting**	1	1				
			Building plans demonstrate compliance with both of the following requirements: -At least 90% of building occupants have access to individual lighting controls. Identify the quantity of individual workstations (private offices and cubicles), the quantity of individual workstation lighting controls provided, and calculate the percentage of workstations that are provided with controls. - ALL shared multi-occupant spaces have lighting controls to enable adjustment. List each multi-occupant space and describe all installed lighting controls.		Notes:				
C	DT (MEP)	IEQ Credit 6.2	**Controllability of Systems - Thermal Comfort**	1	0				
			Building plans demonstrate compliance with both of the following requirements: - At least 50% of the building occupants have individual comfort controls. Operable windows may be used in lieu of controls for occupants located 20 feet inside and 10 feet to either side of an operable window. Identify the quantity of individual workstations (private offices and cubicles), the quantity of individual workstation comfort controls provided, and the percentage of workstations that are provided with controls. - ALL shared multi-occupant spaces have comfort system controls to enable adjustment. List each multi-occupant space and provide a description of the thermal comfort controls.		Notes:				

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C	DT (MEP)	IEQ Credit 7.1	**Thermal Comfort - Design**	1	0				
			Building plans demonstrate compliance with ASHRAE Standard 55-2004, Thermal Environmental Conditions for Human Occupancy (with errata but without addenda). -For spring, summer, fall, and winter, include information on the maximum indoor space design temperature, minimum indoor space design temperature, and maximum indoor space design humidity. -Include a narrative describing the method used to establish thermal comfort conditions and how the systems address the design criteria.		Notes:				
C	O or DT	IEQ Credit 7.2	**Thermal Comfort - Verification**	1					
			Submit sample thermal comfort survey and a narrative describing the survey process planned within 6-18 months after occupancy. Include description of the provisions for creating a plan for corrective action when survey results indicate that more than 20% of occupants are dissatisfied with thermal comfort of the building (per ASHRAE 55-2004). **NOTE:** IEQ Credit 7.1 must be earned to be eligible for this credit.		Notes:				
C	DT (Architect)	IEQ Credit 8.1	**Daylight & Views - Daylight 75% of regularly occupied spaces**	1	1				
			Demonstrate through one of the following options that the appropriate percentage of regularly occupied spaces achieve daylight illuminance levels of a minimum of 25 fc and a maximum of 500 fc. **Option 1:** Demonstrate through computer simulations that 75% or more of all regularly occupied spaces achieve required daylight illuminance levels. **Option 2:** Meet the prescriptive requirements for side-lighting daylight zone. **Option 3:** Demonstrate through records of indoor light measurements that minimum daylight illumination levels are met. **Option 4:** Use a combination of Options 1-3 to document that at least 75% of all regularly occupied spaces receive the minimum daylight illumination. COMPLETE TEMPLATE EQ C8.1		Notes:				
C	DT (Architect)	IEQ Credit 8.2	**Daylight & Views - Views for 90% of regularly occupied spaces**	1	1				
			Building plans include project drawings with line of sight from perimeter vision glazing (in both plan and sectional views). Spreadsheet calculations verify the compliant view areas. COMPLETE TEMPLATE EQ C8.2		Notes:				
INNOVATION & DESIGN PROCESS				6	1				
D/C	ALL	ID Credit 1.1	**Innovation/Enhanced Performance**	1	0				
			Credit Name: COMPLETE TEMPLATE ID C1-5						
D/C	ALL	ID Credit 1.2	**Innovation/Enhanced Performance**	1	0				
			Credit Name: COMPLETE TEMPLATE ID C1-5						
D/C	ALL	ID Credit 1.3	**Innovation/Enhanced Performance**	1	0				
			Credit Name: COMPLETE TEMPLATE ID C1-5						
D/C	ALL	ID Credit 1.4	**Innovation/Enhanced Performance**	1	0				
			Credit Name: COMPLETE TEMPLATE ID C1-5						
D/C	ALL	ID Credit 1.5	**Innovation/Enhanced Performance**	1	0				
			Credit Name: COMPLETE TEMPLATE ID C1-5						
D/C	LEED AP	ID Credit 2	**LEEP Accredited Professional *(Required)***	1	1				
			Provide copy of LEED AP Certificate and describe role in the project.						

City of Rockville
Get Into It

111 Maryland Avenue | Rockville, Maryland 20850-2364 | 240-314-5000
www.rockvillemd.gov

June 8, 2011

Mr. Mark Silverwood
Silverwood / Shady Grove LLC
1925 Isaac Newton Square E, Suite 110
Reston, VA 20190

Dear Mr. Silverwood:

Re: Approval of Reed Brothers Natural Resources Inventory/Forest Stand Delineation, FTP2011-00015

The Natural Resources Inventory/Forest Stand Delineation (NRI/FSD) for Reed Brothers submitted on June 8, 2011 has been approved. Under Section 10.5-12(f) of the Forest and Tree Preservation Ordinance (FTPO), the approved NRI/FSD shall "remain in effect, and serve as the basis for a Forest Conservation Plan for no longer than five (5) years, except that the City Forester may require submission of a revised Forest Stand Delineation if site conditions or applicable law or regulation change within five years of the original approval."

Forest Conservation

The preliminary forest conservation worksheet shows a forest conservation requirement of .69 acres or 30,056 sq. ft. The forest conservation requirement is based on the following:

- A tract area of 190,357 square feet
- Proposed site zoning: MXTD
- Existing forest: 5,227 square feet
- Afforestation required: 23,522 square feet (15% threshold)
- Forest to be cleared: 2,178 square feet
- Reforestation required: 6,534 square feet

The proposed re-development project shall meet the forest conservation requirement on site.

Minimum Tree Cover

The Minimum Tree Cover requirement of 10% or 19,036 square feet is based on the following:

- A tract area of190,357 square feet
- Proposed site zoning: MXTD

Under Section 10.5-22(d) of the FTPO, the minimum tree cover requirement must be met on site.

Significant Trees
Section 10.5-22(a)(1) of the FTPO states the replacement requirement for removing significant trees. Significant replacement trees shall be a minimum of 2.5" caliper for shade and ornamental trees and 7-8' high for evergreen trees.

Priority Trees
Under Section 10.5-21(e), written justification approved by the City Forester is required for removing priority trees. There are no priority trees identified on site.

City of Rockville Street Trees
Replacement of City street trees shall be mitigated at 1:1. The minimum size for street trees is 2.5" caliper, single stem. The City of Rockville Street Tree Master Plan (http://www.rockvillemd.gov/masterplan/treeplan/) should be consulted for specific tree types.

Forest Conservation Plan
A Preliminary and Final Forest Conservation Plan must be reviewed and approved by the City Forester's office. A completed application and review fee shall accompany each plan submission. The Final FCP shall be approved prior to release of the Forestry, Building and Sediment Control permits. Approval of the Final FCP is contingent upon the project meeting all other City requirements including but not limited to stormwater management, erosion and sediment control, water and sewer, traffic and transportation, and zoning and building codes.

Forestry Permit
The applicant is required to obtain a Forestry permit (FTP) prior to Forestry sign off on the Building and/or Sediment Control permits. The following items are required for issuance of the Forestry permit:

1. Submission of the FTP permit application and fee.
2. The applicant must execute and record among the Land Records a Forest Conservation Easement and Declaration of Covenants in a form suitable to the City. The FCE must be submitted in an electronic format acceptable to the City Forester's office.
3. The applicant must execute a Five-year Warranty and Maintenance Agreement in a form suitable to the City.
4. The applicant must post a bond or letter of credit approved by the City.

The Forest and Tree Preservation Ordinance and Forest Conservation Manual provide more detailed information on the above requirements.

Sincerely,

Paula Perez

Paula Perez
Forestry Inspector

Cc: Becky Andrus, Civil Engineer I
Elise Cary, Assistant City Forester
Jeremy Hurlbutt, Planner III
Bobby Ray, Principal Planner
Mark Wessel, Engineering Supervisor

Meredith Byer, VIKA Maryland, LLC

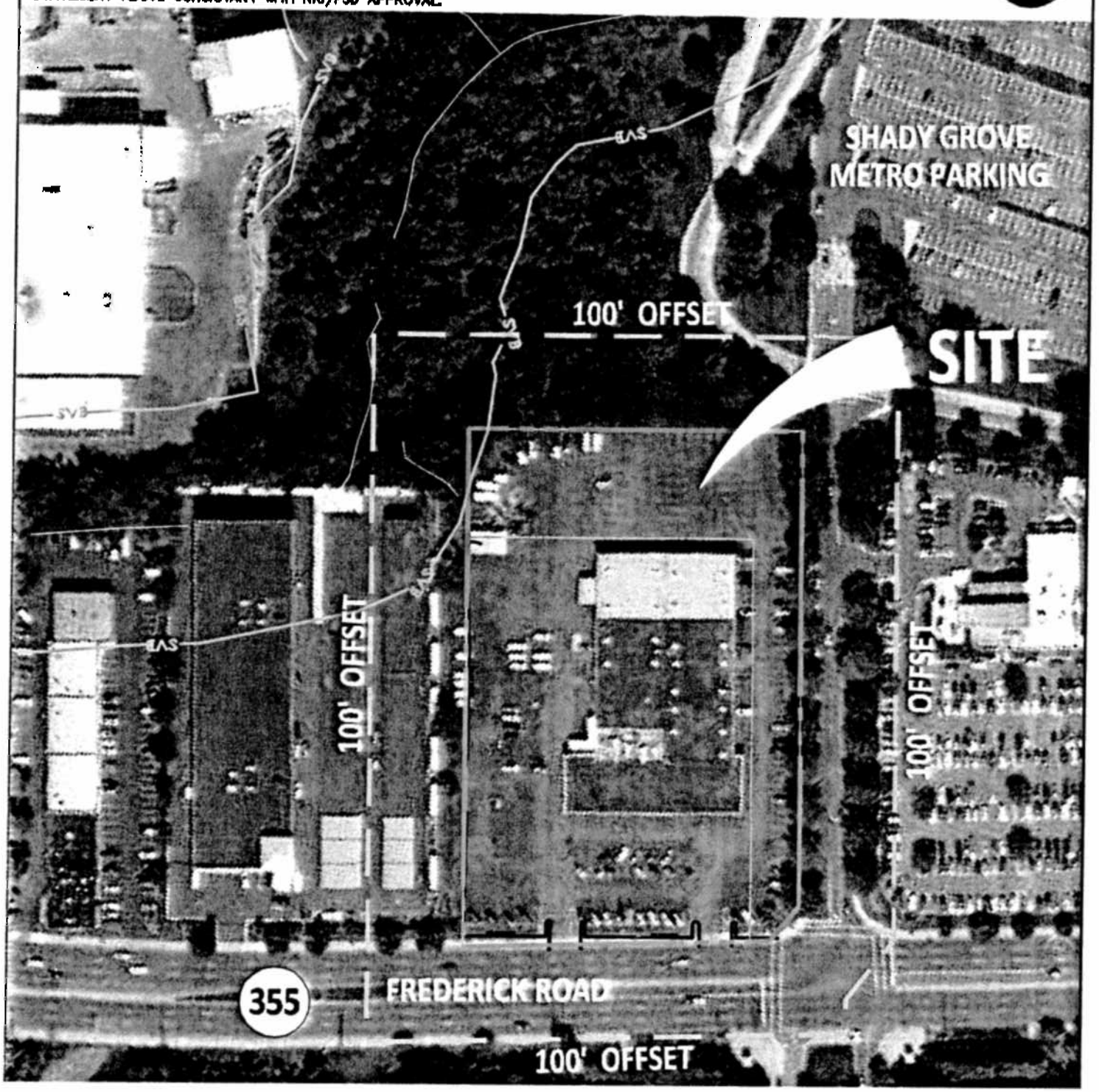
SUSTAINABLE SITES – SS1

PARCEL "A" DERWOOD
REED BROTHERS INC.
PLAT BOOK 88 & NO. 9337
WSSC MAP 221NW08
9TH ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

VIKA
ENGINEERS ■ PLANNERS ■ LANDSCAPE ARCHITECTS ■ SURVEYORS ■ GPS SERVICES

VIKA INCORPORATED
20251 CENTURY BOULEVARD SUITE 400 ■ GERMANTOWN, MD 20874
(301)916-4100 ■ FAX (301)916-2262
GERMANTOWN, MD McLEAN, VA

NOTE: SUBJECT PROPERTY NOT ON PRIME FARMLAND; NOT ON PREVIOUSLY UNDEVELOPED LAND THAT IS BELOW 5 FEET ABOVE THE 100 YEAR FLOOD ELEVATION PER FEMA; NOT ON HABITAT FOR ANY ENDANGERED OR CRITICAL SPECIES; NOT WITHIN 100 FEET OF ANY WETLANDS; NOT WITHIN 50 FEET OF WATER BODY; AND NOT ON PUBLIC PARKLAND.
STATEMENT ABOVE CONSISTANT WITH NRI/FSD APPROVAL.



CABLE TELEVISION CONDUIT	
ELECTRICAL CONDUIT	
EDGE OF PAVEMENT	
FENCE LINE	
NATURAL GAS CONDUIT	
OVERHEAD WIRES	
TELEPHONE/COMMUNICATIONS CONDUIT	
PROPERTY LINES	
PUBLIC UTILITIES EASEMENTS	
SANITARY SEWER CONDUIT	
STORM DRAIN CONDUIT	
WATER CONDUIT	
SANITARY CLEANOUT	
STORM DRAIN MANHOLE	
ELECTRICAL JUNCTION BOX	
ELECTRICAL MANHOLE	
FIRE DEPARTMENT CONNECTION	
FIRE HYDRANT	
GAS MANHOLE	
GUY POLE	
GAS VALVE	
LIGHT POLE	
PHONE PEDESTAL	
PHONE MANHOLE	
UTILITY POLE	
SANITARY MANHOLE	
TRAFFIC CONTROL BOX	
TRAFFIC SIGNAL POLE	
TREE	
CABLE TELEVISION PEDESTAL	
UNKNOWN UTILITY MANHOLE	
WATER METER	
WATER MANHOLE	
WATER VALVE	
BOLLARD	
SIGN POST	
WOOD POST	
INLETS	
CURB INLET	
CONC.	CONCRETE
C&G	AND GUTTER
BLDG.	BUILDING
STY.	STORY
TRV	ELECTRICAL TRANSFORMER
ASPH.	ASPHALT
ESMT.	EASEMENT
RCP	REINFORCED CONCRETE PIPE
CMP	CORRIGATED METAL PIPE
BRL	BUILDING RESTRICTION LINE
R/W	RIGHT-OF-WAY
FF.	FINISHED FLOOR ELEVATION

NRI LEGEND

EXISTING TREE

EXISTING TREE GREATER THAN OR EQUAL TO 12" DBH

EXISTING TREE CANOPY LINE

PROPOSED LIMITS OF DISTURBANCE (SUBJECT TO CHANGE WITH SITE PLAN)

SOIL BOUNDARY & LABEL

ON-SITE FOREST

OFF-SITE FOREST

SOILS LEGEND

MAP UNIT SYMBOL	MAP UNIT NAME	SOIL CLASSIFICATION "TYPE"
2B	GLENELG SILT LOAM, 3 TO 8 PERCENT SLOPES	"B"
400	URBAN LAND	NO CLASSIFICATION ASSUMED TYPE "C"

PRELIMINARY FOREST CONSERVATION WORKSHEET

CITY OF ROCKVILLE FOREST CONSERVATION WORKSHEET*
SHADY GROVE SITE

20-Jan-11

NET TRACT AREA:

A. Total tract area ...	4.37
B. Deductions (land dedication not in construction on this plan, other deductions - specify)	0.00
C. Net Tract Area ... =	4.37

LAND USE CATEGORY:

ZONING: Place a "1" under the column corresponding to the correct zone of the site	R-400, R-200	R-90, R-75, R-60, R-150	RMD10, RMD15, RMD25	I-L, I-H, RPR, RPC, MXT, MXC, MXNC, MXB, MXE, MXCD, MXTD	Park
Zone: (choose only one)	0	0	0	1	0

D. Afforestation Threshold ...	15%	x F =	0.66
E. Conservation Threshold ...	15%	x F =	0.66

EXISTING FOREST COVER:

F. Existing forest cover (within net tract) ... =	0.12
G. Area of forest above conservation threshold ... =	0.00

BREAK EVEN POINT:

H. Breakeven Point (amount of forest retained so that no mitigation is required) ... =	0.00
I. Clearing permitted without mitigation ... =	0.00

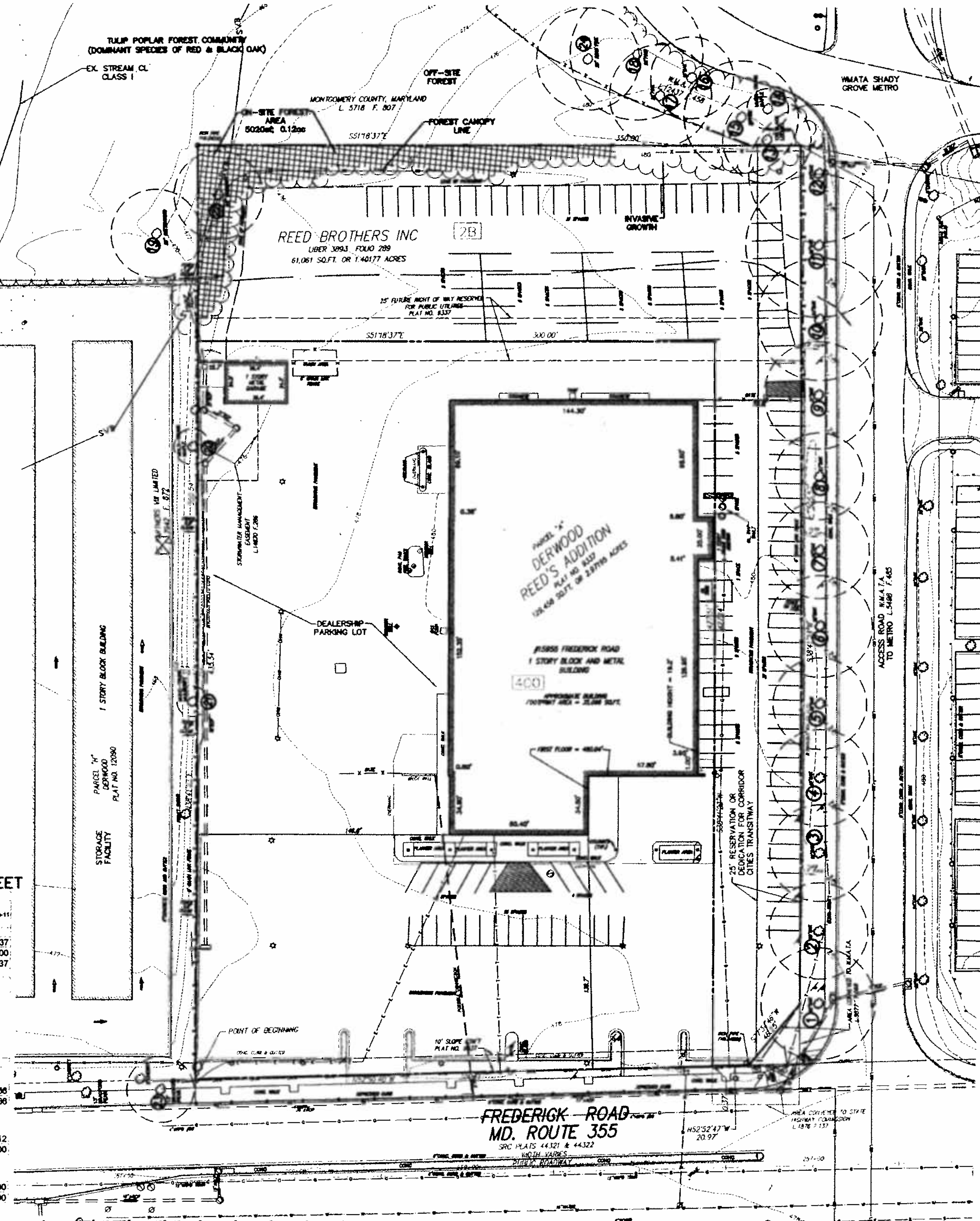
PROPOSED FOREST CLEARING:

J. Total area of forest to be cleared ... =	0.05
K. Total area of forest to be retained ... =	0.07

PLANTING REQUIREMENTS:

L. Reforestation for clearing above conservation threshold ... =	0.00
M. Reforestation for clearing below conservation threshold ... =	0.15
N. Credit for retention above conservation threshold ... =	0.00
P. Total reforestation required ... =	0.15
Q. Total afforestation required ... =	0.54
R. Total planting requirement ... =	0.69

*-Final figures pending determinations of Limit of Disturbance & FCP Approval



NRI DATA TABLE:

ACREAGE OF TRACT (GROSS AREA)	4.37
ACREAGE OF TRACT REMAINING IN AGRICULTURAL USE	0.00
ACREAGE OF TOTAL EXISTING FOREST	0.12
ACREAGE OF 100-YR FLOODPLAINS	0.00
ACREAGE OF FOREST W/IN 100-YR FLOODPLAINS	0.00
ACREAGE OF WETLANDS	0.00
ACREAGE OF FOREST WITHIN WETLANDS	0.00
ACREAGE OF ENVIRONMENTAL BUFFERS	0.01
ACREAGE OF FOREST WITHIN ENVIRONMENTAL BUFFERS	0.01
LINEAR FEET AND AVERAGE WIDTH OF ENVIRONMENTAL BUFFER PROVIDED	Linear Feet: 70' Average Width: 20'

GRAPHIC SCALE

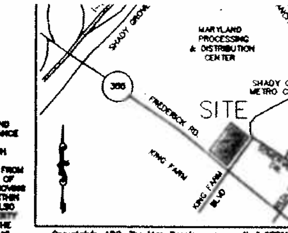
(IN FEET)
1 inch = 30 ft.

AREA TABULATION

PARCEL "A"	129,458 SQ.FT.	OR 2.97195 ACRES
REED BROTHERS DEEDED PARCEL	61,061 SQ.FT.	OR 1.40177 ACRES
TOTAL AREA OF SURVEY	190,519 SQ.FT.	OR 4.37372 ACRES

SITE DESCRIPTION:

THE SUBJECT PROPERTY IS LOCATED ON THE NORTH SIDE OF THE INTERSECTION OF MD ROUTE 355 AND THE WMATA ACCESS DRIVE. THE SITES CURRENT USE IS AN AUTOMOTIVE DEALERSHIP AND MAINTENANCE SHOP RESIDING IN ONE LARGE BUILDING SURROUNDED BY ASPHALT. ON THE EAST SIDE OF THE SITE, THERE IS AN ACCESS ROAD THAT LEADS TO THE METRO PARKING LOT WITH STREET TREES LINING BOTH SIDES. AT THE BACK OF THE PROPERTY, THERE IS A SMALL MAINTAINED GRASS EMBANKMENT WITH INVASIVE UNDERGROWTH THAT STRADDLES THE NORTH PROPERTY LINE. THERE IS CANOPY OVERHANG FROM THE FORESTED AREA BEHIND THE SITE. PAST THE PROPERTY LIMITS, NEAR THE NORTH EAST CORNER OF THE SITE, THERE AREA FEW LARGE PINE & MAPLE TREES WITH A MAINTAINED GRASS UNDERNEATH. MOVING TO THE NORTH CORNER OF THE PROPERTY, THERE IS A SMALL CORNER OF THE SITE THAT RESIDES WITHIN THE STREAM VALLEY BUFFER WHERE THE OFFSITE FOREST EXTENDS INTO THE PROPERTY. THERE IS ALSO INVASIVE UNDERGROWTH AND TREE CANOPY OVERHANG, BUT NO SIGNIFICANT TREES WITHIN THE PROPERTY LIMITS. THE WESTERN PROPERTY HAS A FEW HEDGEROW TREES THAT ARE GROWING UP IN BETWEEN THE FENCE SEPARATING THE SITE FROM THE ADJACENT PROPERTY. THESE TREES ARE NOT GREATER THA 6" DBH AND ARE NOT DESIRABLE TO BE PRESERVED. AT THE WESTERN CORNER OF THE PROPERTY, THERE ARE STREET TREES THAT FALL WITHIN THE 100' SURROUNDING THE SITE, AND HAVE BEEN IDENTIFIED ON THE INVENTORY.



Copyright: ADC, The Map People, use permit # 20711180

VICINITY MAP
SCALE: 1" = 1000'

SURVEY NOTES:

1.) THE SUBJECT PROPERTY IS LOCATED ON TAX ASSESSMENT MAP NO. GS12 WITH A TAX ACCOUNT NO. OF 09-00775906 & 09-00775910.

2.) THE HORIZONTAL DATUM IS BASED ON NAD83(CORS)/MD1990 (MARYLAND GRID COORDINATE SYSTEM) USING THE FOLLOWING SURVEY CONTROL STATIONS: NGS CONTROL POINT, U.S. NAVAL OBSERV CORS ARP, PID NO. AI7403 NGS CONTROL POINT, DC WAAS 1 CORS ARP, PID NO. DF8217

3.) THE VERTICAL DATUM IS BASED ON NGVD29 USING THE FOLLOWING W.S.S.C. BENCH MARKS AS SHOWN ON W.S.S.C. WATER AND SEWER CONTRACT DRAWING 88 AW/CT 1714R, SHEET 2 OF 8.
BENCH MARK ☐ CUT LPC CATCH BASIN ALONG FREDERICK RD. (MD RTE 355) ELEV. = 476.88
BENCH MARK ☐ CUT LPC CATCH BASIN ALONG FREDERICK RD. (MD RTE 355) ELEV. = 477.38

4.) THE SUBJECT PROPERTY IS LOCATED IN ZONE "X" (AREA DETERMINED TO BE OUTSIDE THE 0.2% CHANCE FLOODPLAIN) AS SHOWN ON FLOOD INSURANCE RATE MAP (FIRM) MAP NO. 24031C0331D, FOR MONTGOMERY COUNTY, MARYLAND, DATED SEPTEMBER 29, 2006.

4.) THE PROPERTY IS ZONED "TOMX-2" IN MONTGOMERY COUNTY. PROPOSED ANNEXATION TO CITY OF ROCKVILLE PENDING PROPOSED ZONING "MXTD".

NRI NOTES:

1.) THE GROSS TRACT AREA IS 4.37 ACRES.

2.) THERE IS 5020sf OF FOREST ON THE PROPERTY & THAT IS CONTIGUOUS WITH FOREST ON THE ADJACENT PROPERTY TO THE NORTH CORNER OF THE SITE.

3.) THERE ARE NO SIGNIFICANT TREES ON THE SUBJECT PROPERTY, AND 24 TREES LOCATED OFF THE PROPERTY AS SHOWN ON THE PLAN.

4.) THE THREE SIGNIFICANT TREES WITHIN 100' OF THE SUBJECT PROPERTY ARE SPECIMEN TREES AS INDICATED ON THE NRI TREE TABLE.

5.) THERE ARE NO CHAMPION TREES OR TREES 75% OF THE STATE CHAMPION ON OR WITHIN 100' OF THE SUBJECT PROPERTY.

6.) FIELD WORK WAS CONDUCTED BY KATHLEEN KULENGUSKI ON JANUARY 17, 2011. A FORESTRY DIAMETER TAPE WAS USED TO MEASURE TREES. ON-SITE TREES WERE SURVEY LOCATED, OFF-SITE TREES ARE APPROXIMATE LOCATIONS BASED ON VISUAL OBSERVATIONS. NO SEPARATE FIELD DATA SUMMARY SHEETS WERE PREPARED WITH THIS PLAN. EXISTING VEGETATION INFORMATION ASSOCIATED WITH THIS PROPERTY IS AS SHOWN ON THIS PLAN.

7.) THE SUBJECT PROPERTY IS NOT IDENTIFIED IN THE MONTGOMERY COUNTY LOCATIONAL ATLAS AND INDEX OF HISTORIC SITES.

8.) THERE ARE NO WATERS OF THE UNITED STATES OR 100 YEAR FLOOD PLAINS LOCATED ON THE SUBJECT PROPERTY. THIS SITE IS NOT WITHIN AN SPA OR PMA.

9.) THE SUBJECT PROPERTY IS LOCATED IN THE ROCK CREEK WATERSHED, A CLASS I STREAM.

10.) THE WILDLIFE AND HERITAGE DIVISION OF THE MD DNR HAS BEEN CONTACTED TO DETERMINE IF THERE ARE ANY RARE, THREATENED OR ENDANGERED SPECIES WITHIN THE PROJECT SITE. THERE WERE NONE OBSERVED AT THE TIME OF THE SITE VISIT.

11.) THE SUBJECT PROPERTY WAS FIELD SURVEYED BY VIKA INC., ON NOVEMBER 18, 2010.

12.) THE SUBJECT PROPERTY IS LOCATED ON WSSC MAP 221NW08.

13.) THE SUBJECT PROPERTY IS PROPOSED FOR RESIDENTIAL DEVELOPMENT.

14.) THE STREAM VALLEY BUFFER (SVB) WAS DETERMINED BY USING THE CITY OF ROCKVILLE'S CALCULATION METHOD (125' FROM STREAM WHEN SLOPES ARE <15%), BASED OFF OF THE STREAM LINE PROVIDED FROM M-NCPPC TOPOGRAPHICAL INFORMATION.

15.) INVASIVE SPECIES LOCATED ON THE SITE AS IDENTIFIED ON THE CITY OF ROCKVILLE EXOTIC AND INVASIVE PLANT LIST DATED APRIL 2008 ARE WHITE MULBERRY, PRIMARILY PRIVET, MULTIFLORA ROSE & JAPANESE HONEYSUCKLE.

16.) THE LIMIT OF DISTURBANCE, BASED ON A PRELIMINARY DELINEATION WOULD NOT HAVE ANY PRIORITY FOREST WITHIN IT, AND THE AFFORESTATION REQUIREMENT DOES NOT EXCEED THE AFFORESTATION THRESHOLD.

17.) THE OFF-SITE FOREST IS PREDOMINANTLY A TULIP POPLAR AND MAPLE COMMUNITY, WITH UNDERSTORY SHRUB AND VINE GROWTH. THE PROPOSED DEVELOPMENT WILL DISTURB APPROXIMATELY 2,050 SF OF FOREST, OF WHICH SOME IS WITHIN A PRIORITY AREA. THERE IS A SMALL AMOUNT OF STREAM VALLEY BUFFER THAT COMES ONTO THE SITE THAT WILL NOT BE DISTURBED. ANY PLANTING THAT DOES OCCUR ON SITE WILL BE TO FURTHER ENHANCE THE OVERALL AREA OF THE CONTIGUOUS FOREST. APPROPRIATE TREE PROTECTION MEASURES WILL BE IMPLEMENTED AT THE TIME OF FINAL FOREST CONSERVATION, DUE TO THE POSSIBILITY OF ADJUSTMENT TO THE LIMIT OF DISTURBANCE TO REDUCE TOTAL AMOUNT OF FOREST IMPACT.

18.) THE PROPERTY WOULD BE SUBJECT TO THE MINIMUM TREE COVER & OTHER REQUIREMENTS OF THE OCTOBER 12, 2008 ROCKVILLE FOREST CONSERVATION MANUAL.

TREE TABLE:

	COMMON NAME	SCIENTIFIC NAME	DBH*	COND.%**	COMMENTS
1	Willow Oak	Quercus phellos	22"	69	Street tree
2	Willow Oak	Quercus phellos	19"	63	Street tree
3	Willow Oak	Quercus phellos	19"	63	Street tree
4	Willow Oak	Quercus phellos	19"	63	Street tree
5	Willow Oak	Quercus phellos	18"	63	Street tree
6	Willow Oak	Quercus phellos	20"	63	Street tree
7	Willow Oak	Quercus phellos	19"	66	Street tree
8	Willow Oak	Quercus phellos	17"	66	Street tree
9	Willow Oak	Quercus phellos	21"	69	Street tree
10	Willow Oak	Quercus phellos	24"	75	Street tree
11	Willow Oak	Quercus phellos	26"	75	Street tree
12	Willow Oak	Quercus phellos	27"	72	Street tree
13	Black Locust	Robinia pseudoacacia	17"	66	Off-site tree
14	Amur Maple	Acer ginnala	40 sq in	72	Off-site tree; multi-stem
15	White Pine	Pinus strobus	22"	75	Off-site tree
16	Northern Red Oak	Quercus rubra	18"	81	Off-site tree
17	White Pine	Pinus strobus	20"	75	Off-site tree
18	White Pine	Pinus strobus	26"	81	Off-site tree
19	Eastern Cottonwood	Populus deltoides	28"	66	Off-site forest tree
20	Silver Maple	Acer saccharinum	n/a	25	Off-site tree; sprouted stump; No replacement req.
21	White Mulberry	Morus alba	n/a	28	Off-site tree; Sprouted stump; No replacement req.
22	White Mulberry	Morus alba	24"	66	Off-site tree
23	Bradford pear	Pyrus calleryanna 'Bradford'	13"	66	Street tree
24	White Pine	Pinus strobus	20"	0	Off-site tree; Dead

* Diameter at Breast Height
** Estimate of health of the tree using CTLA handbook; Condition rating of the preparer may differ from those of the City of Rockville Forestry Staff; See attached for for individual tree assessments.

Approved NRI/FSD
City of Rockville
FTPO # 2011-00015
Forestry ... 6/8/11 Date
Environmental ... 6/10/11 Date

Approved ... SD
City of Rockville
...#
Forestry
Environmental Date

6-7-11

NATURAL RESOURCES INVENTORY
PREPARED BY: MEREDITH BYER, RLA
MD. LICENSED LANDSCAPE ARCHITECT No. 3108

APPLICANT/CONTRACT PURCHASER

SILVERWOOD / SHADY GROVE LLC
1925 ISAAC NEWTON SQUARE E, SUITE 110
RESTON, VA 20190
703-777-8322

ENGINEERS ■ PLANNERS ■ LANDSCAPE ARCHITECTS ■ SURVEYORS ■ GPS SERVICES

VIKA INCORPORATED
20251 CENTURY BOULEVARD SUITE 400 ■ GERMANTOWN, MD 20874
(301)916-4100 ■ FAX (301)916-2262
GERMANTOWN, MD McLEAN, VA

REED BROTHERS

9TH ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND
(PENDING ANNEXATION TO THE CITY OF ROCKVILLE)

NATURAL RESOURCES INVENTORY/ INTERMEDIATE FSD PLAN

VIKA REVISIONS

2) REV. 5/2/11 PER REVIEWERS COMMENTS
1) REV. 3/28/11 PER REVIEWERS COMMENTS

DATE	FEB. 11, 2011
DES. LA	DWN. TSS
SCALE:	1"=30'
PROJECT/FILE NO.	M16228

10 BASIC SERVICES:

	Business Name	Service Type
1.	Sun Trust Bank	Bank
2.	Safeway	Supermarket
3.	Deer Meadow Park	Park
4.	Pharmacy at Safeway	Pharmacy
5.	Fontina Grille	Restaurant
6.	Kidstop Child Development Center	School
7.	Elaj Aveda Day Spa	Beauty Salon
8.	Derwood Bible Church	Place of Worship
9.	7-Eleven	Convenience Grocery
10.	State of the Art Dental Group	Dental Office

RESIDENTIAL DEVELOPMENT

LDi Lessard Design, Inc
Architecture | Planning | Interiors
Lessard Design, Inc
1881 CAMPUS COMMONS DRIVE, SUITE 105, RESTON, VA 20191
P: 703.596.4486 | F: 703.596.0147 | WWW.LESSARDDESIGN.COM

GREEN BUILDING DOCUMENTATION

SUSTAINABLE SITES CREDIT 2 - COMMUNITY CONNECTIVITY

REED BROTHERS AT SHADY GROVE

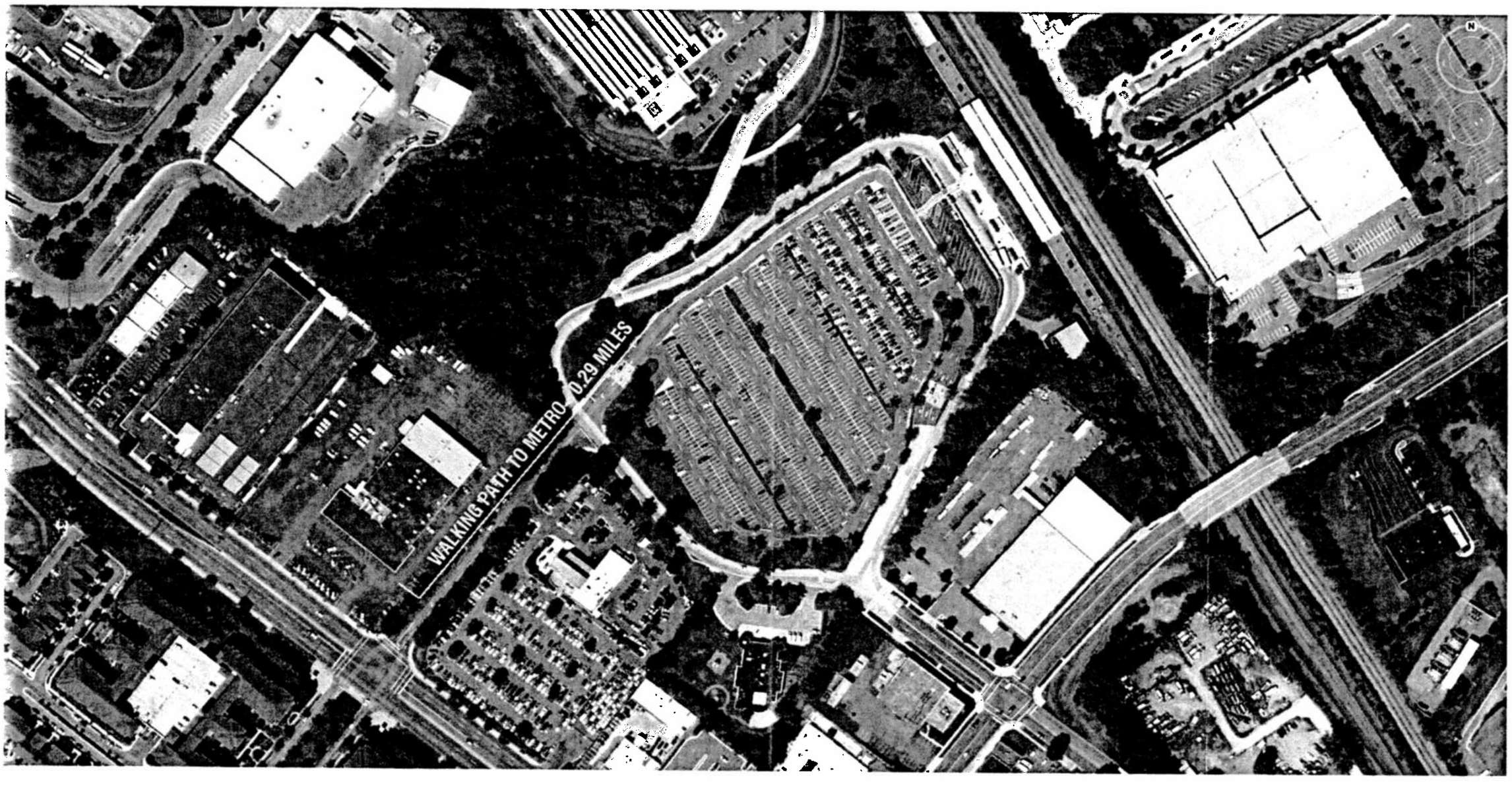
ROCKVILLE, MARYLAND

SILVERWOOD COMPANIES

0 NTS

07.29.20

SIL.00



LDi Lessard Design, Inc
Architecture | Planning | Interiors
Lessard Design, Inc
1881 CAMPUS COMMONS DRIVE, SUITE 105, RESTON, VA 20191
P: 703.596.4486 | F: 703.596.0147 | WWW.LESSARDDESIGN.COM

GREEN BUILDING DOCUMENTATION

SUSTAINABLE SITES CREDIT 4.1 - ALTERNATIVE TRANSPORTATION
PUBLIC TRANSPORTATION ACCESS

REED BROTHERS AT SHADY GROVE
ROCKVILLE, MARYLAND
SILVERWOOD COMPANIES

0
NTS

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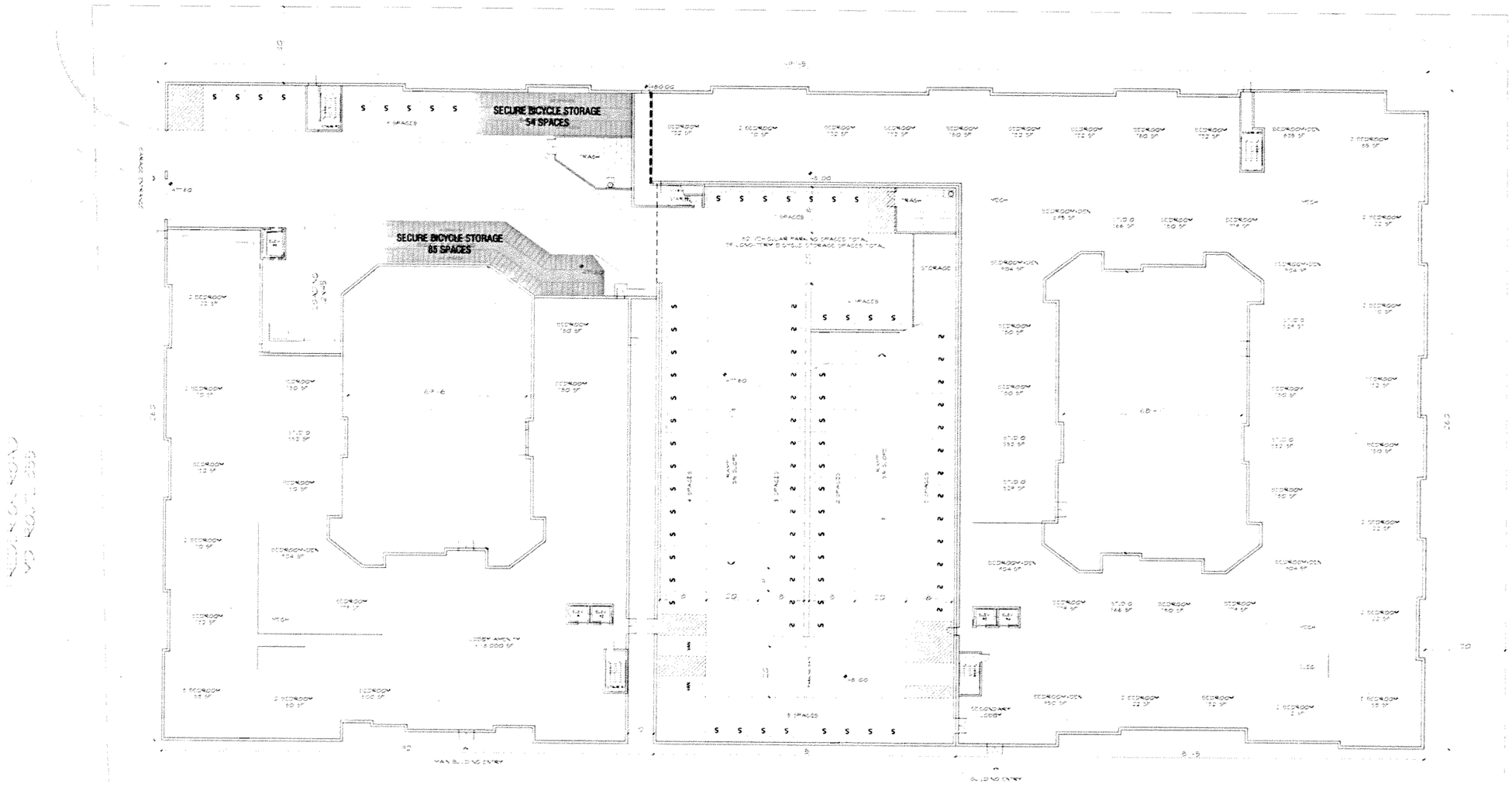

GROUND FLOOR PLAN

TOTAL BUILDING OCCUPANTS: 909 OCCUPANTS*
TOTAL BICYCLE STORAGE REQUIRED: 137 SPACES
TOTAL BICYCLE STORAGE PROVIDED: 139 SPACES

*Residential FTE occupancy was calculated per the LEED NC v2.1 SSc4.2 ruling dated 12/9/2005, which assumes 1 occupant for a studio unit, 2 occupants for a 1 BR unit, 3 occupants for a 2BR unit, and 4 occupants for a 3 BR unit.

LDi Lessard Design, Inc
Architecture | Planning | Interiors
Lessard Design, Inc
1881 CAMPUS COMMONS DRIVE, SUITE 105, RESTON, VA 20191
P: 703.596.4486 | F: 703.596.0147 | WWW.LESSARDDESIGN.COM

GREEN BUILDING DOCUMENTATION

SUSTAINABLE SITES CREDIT 4.2 - ALTERNATIVE TRANSPORTATION
BICYCLE STORAGE & CHANGING ROOMS

REED BROTHERS AT SHADY GROVE
ROCKVILLE, MARYLAND
SILVERWOOD COMPANIES

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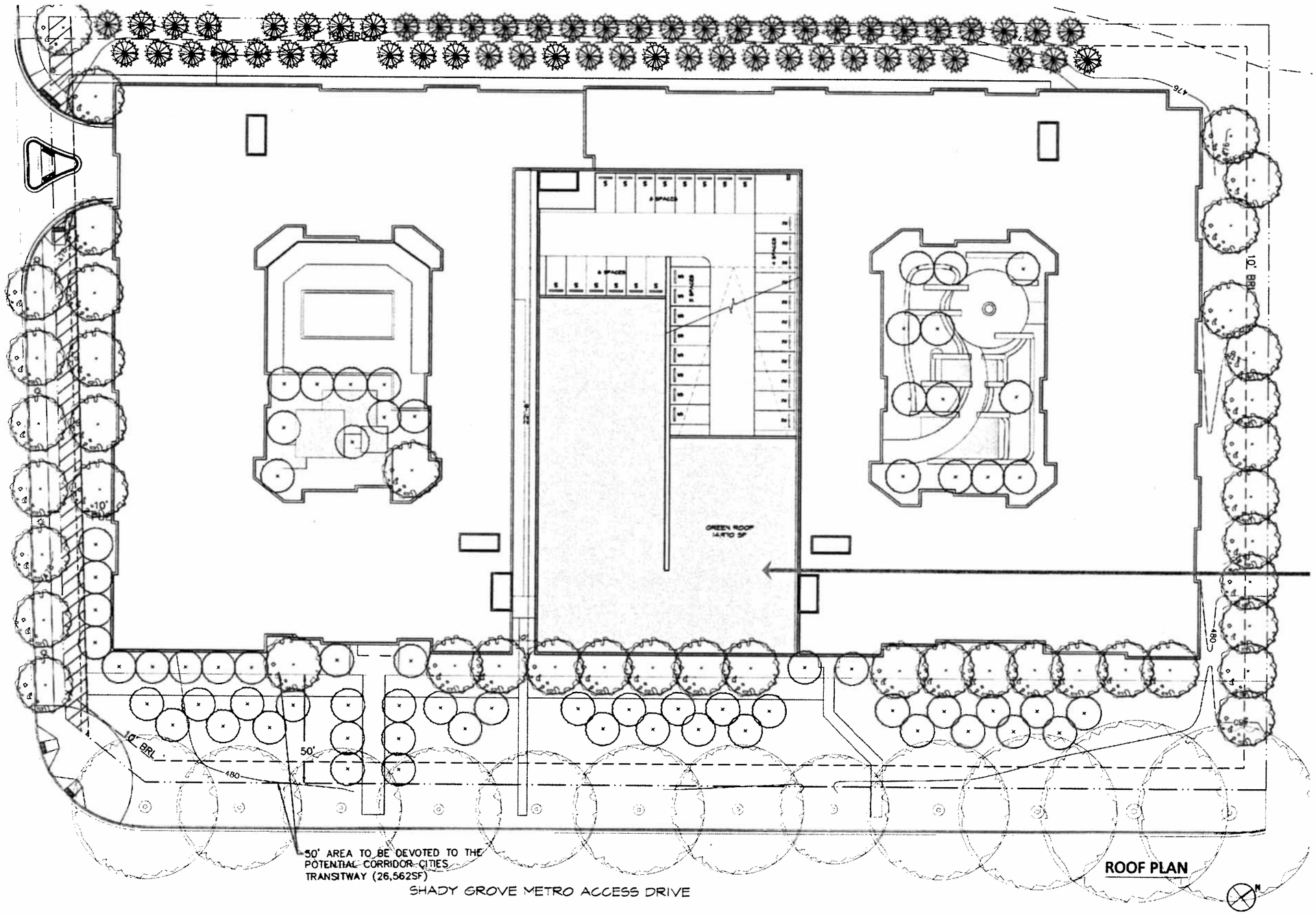

Total Parking Provided : 518 spaces
Total Parking under Greenroof: 485 spaces
(93.6 percent covered parking)

LDi Lessard Design, Inc
Architecture | Planning | Interiors
Lessard Design, Inc
1881 CAMPUS COMMONS DRIVE, SUITE 105, RESTON, VA 20191
P: 703.596.4486 | F: 703.596.0147 | WWW.LESSARDDESIGN.COM

GREEN BUILDING DOCUMENTATION

SUSTAINABLE SITES CREDIT 7.1 - HEAT ISLAND EFFECT
NON-ROOF

REED BROTHERS AT SHADY GROVE
ROCKVILLE, MARYLAND
SILVERWOOD COMPANIES

0 NTS

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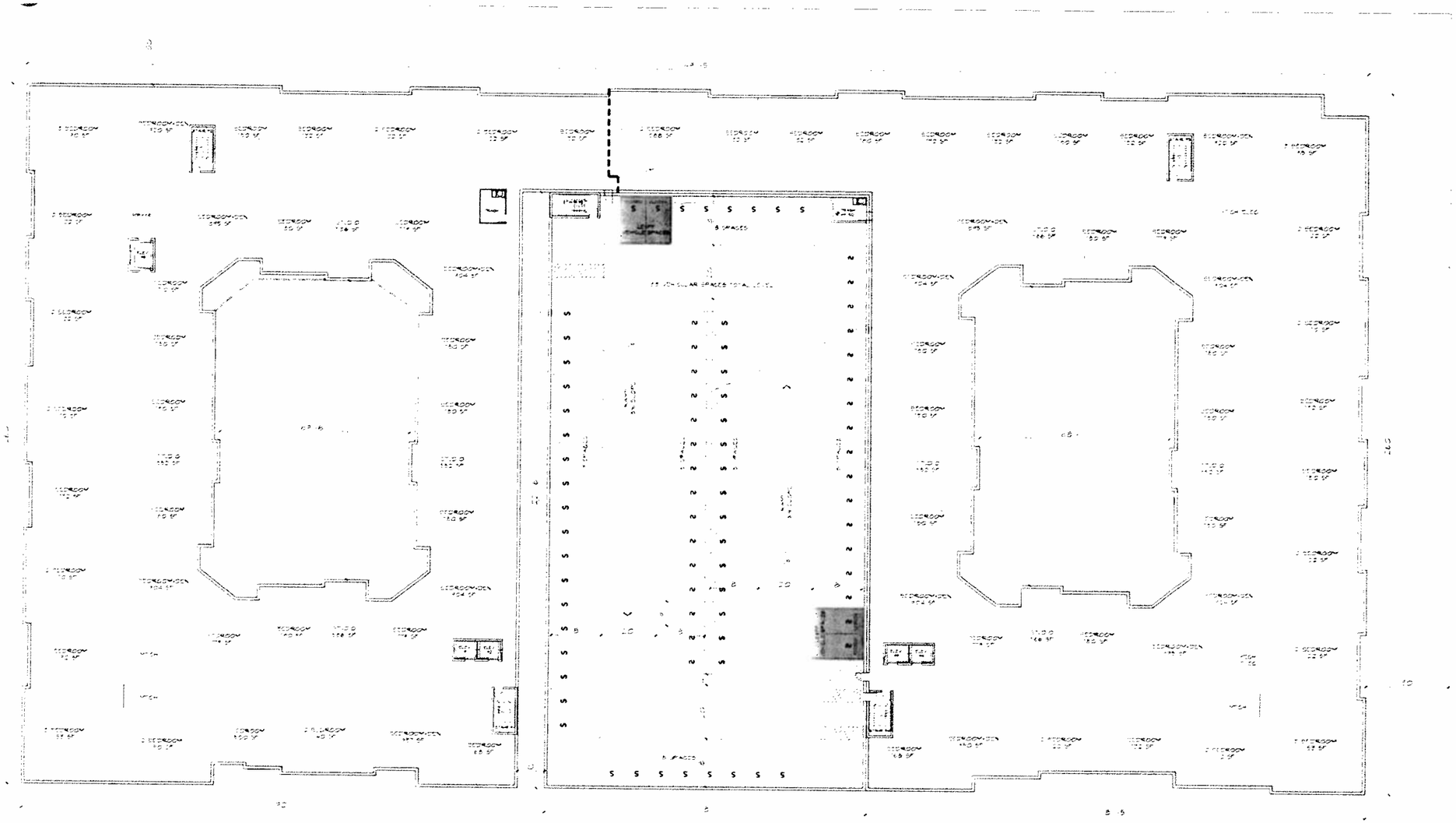
SIL.00



PARKING					
			# OF LEVELS	TOTAL # CARS	SPACES FOR LOW-EMISSION AND FUEL-EFFICIENT VEHICLES
GROUND FLOOR	476.00	481.00	1	82	6
LEVEL 2	485.50	491.50	1	83	4
LEVEL 3	496.00	502.00	1	83	4
LEVEL 4	506.50	512.50	1	83	4
LEVEL 5	517.00	523.00	1	83	4
LEVEL 6	527.50	533.50	1	83	4
LEVEL 6.5	538.00		0.5	21	
TOTAL PARKING			6.5	518	26

TYPICAL FLOOR PLAN

LDi Lessard Design, Inc
Architecture | Planning | Interiors
1881 CAMPUS COMMONS DRIVE, SUITE 105, RESTON, VA 20191
P: 703.596.4486 | F: 703.596.0147 | WWW.LESSARDDESIGN.COM

GREEN BUILDING DOCUMENTATION

SUSTAINABLE SITES CREDIT 4.3 - ALTERNATIVE TRANSPORTATION
LOW-EMISSION AND FUEL EFFICIENT VEHICLES

REED BROTHERS AT SHADY GROVE

ROCKVILLE, MARYLAND
SILVERWOOD COMPANIES

0
NTS

07.29.2
SIL.0

July 29, 2011

Mr. Jeremy Hurlbutt
City of Rockville
Department of Community Planning and Development Services
111 Maryland Avenue
Rockville, Maryland 20850-2364

Project: Reed Brothers at Shady Grove

Re: LEED Documentation – ID Credit 2

Dear Jeremy,

This letter is to certify that I, Kristy Nachman, of Lessard Design, Inc., am the acting LEED AP on the Reed Brothers at Shady Grove project. My role includes advising the owner on environmental related issues, coordinating the execution and documentation of the LEED credits, and serving as a general resource to the design team.

Should you have any questions, please feel free to call me.

Sincerely,

Kristy Nachman, LEED AP Building Design and Construction
Lessard Design, Inc.
1881 Campus Commons Drive, Suite 105
Reston, Virginia 20191
703-349-7856

GREEN BUILDING CERTIFICATION INSTITUTE HEREBY CERTIFIES THAT

Kristy A Nachman

HAS ATTAINED THE DESIGNATION OF

LEED AP BUILDING DESIGN + CONSTRUCTION

BY DEMONSTRATING KNOWLEDGE OF GREEN BUILDING PRACTICE REQUIRED FOR SUCCESSFUL IMPLEMENTATION OF THE LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED®) GREEN BUILDING RATING SYSTEM™.

Chairperson

Peter Templeton, GBCI President

April 19, 2011
Date Issued

10089880
Identification Number

April 18, 2013
Valid Through

GBCI

Attachment 1

REED BROTHERS AT SHADY GROVE METRO

ROCKVILLE, MARYLAND
LANDSCAPE PLANS

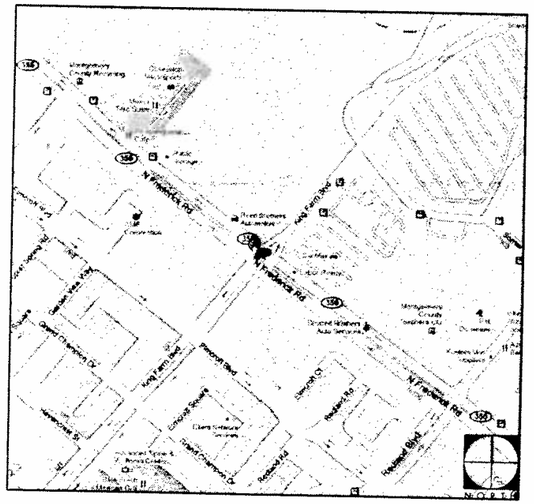
APRIL 20, 2011

CLIENT
SILVERWOOD/ SHADYGROVE, LLC.
1925 ISAAC NEWTON SQUARE E
SUITE 110
RESTON, VA 20190
TEL: 703 777 8322
FAX: 703 777 8472
CONTACT: MARK SILVERWOOD

CLIENT'S REPRESENTATIVE
RJS REALTY SERVICES, LLC
3809 WILLOW TREE DRIVE
ROCKVILLE, MD 20850
TEL: 240.678.5958
FAX: 301.294.0799
CONTACT: BOB STODDARD

ARCHITECT
LESSARD DESIGN INC.
11911 CAMPUS COMMONS DRIVE
SUITE 105
RESTON, VA 20191
TEL: 703.596.4486
FAX: 703 596 0147
CONTACT: KRISTY NACHMAN

CIVIL ENGINEER
VIKA INC.
20251 CENTURY BLVD.
SUITE 400
GERMANTOWN, MD 20874
TEL: 301.916.4100
FAX: 301 916 2262
CONTACT: INES VEGA



VICINITY MAP
NOT TO SCALE

Sheet List Table

Sheet Number	Sheet Title
L1.01	HARDSCAPE PLAN
L2.01	HARDSCAPE DETAILS
L2.02	HARDSCAPE DETAILS
L3.01	LANDSCAPE PLAN
L3.02	PLANT LIST
L4.01	PLANTING DETAILS

REVISION INDEX

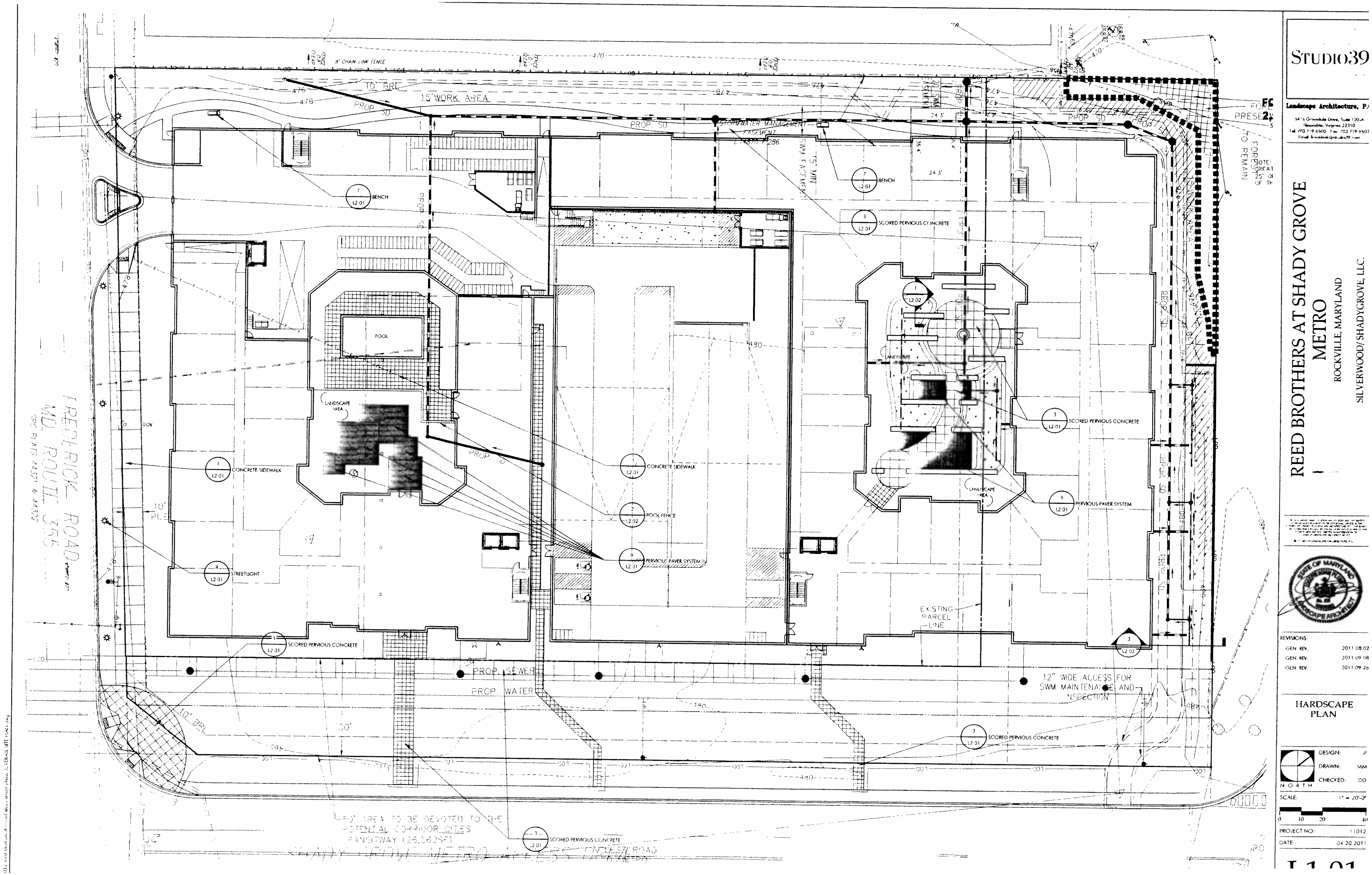
REVISION DATE	REVISED ITEM DESCRIPTION
2011.08.02	GENERAL REVISIONS PER CITY COMMENTS
2011.09.08	GENERAL REVISIONS PER CITY COMMENTS
2011.09.26	GENERAL REVISIONS PER CITY COMMENTS

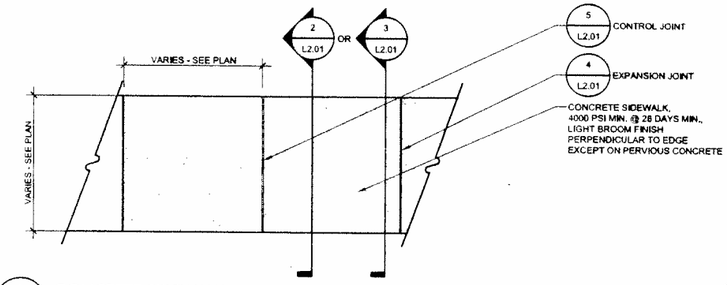
LANDSCAPE ARCHITECT

STUDIO39

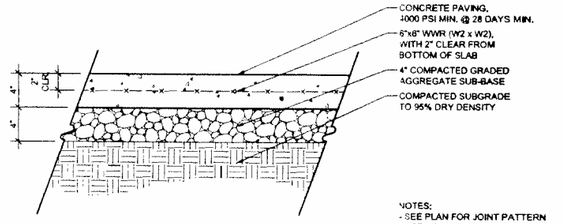
Landscape Architecture, P.C.

6416 GROVEDALE DRIVE, SUITE 100-A
ALEXANDRIA, VIRGINIA 22310
TEL: (703) 719-6500
FAX: (703) 719-6503
CONTACT: DAVID JUDD

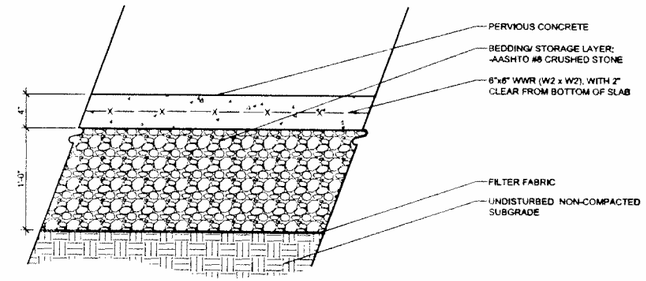

STUDIO39
Landscape Architecture, P.
REED BROTHERS AT SHADY GROVE METRO
ROCKVILLE, MARYLAND
SILVERWOOD/SHADYGROVE, LLC.
FREDERICK ROAD
MD. ROUTE 355
8' CHAIN LINK FENCE
10' BRL
15' WORK AREA
PROP. SD
STORMWATER MANAGEMENT EASEMENT
15' MIN SWM EASEMENT
FOREST TO REMAIN
BENCH
SCORED PERVIOUS CONCRETE
CONCRETE SIDEWALK
POOL FENCE
PERVIOUS PAVER SYSTEM
STREETLIGHT
POOL
LANDSCAPE AREA
EXISTING PARCEL LINE
PROP. SEWER
PROP. WATER
12" WIDE ACCESS FOR SWM MAINTENANCE AND INSPECTION
10' PUE
REVISIONS:
GEN. REV. 2011.08.02
GEN. REV. 2011.09.08
GEN. REV. 2011.09.26
HARDSCAPE PLAN
DESIGN: JP
DRAWN: MM
CHECKED: DD
NORTH
SCALE: 1" = 20'-0"
PROJECT NO: 11012
DATE: 04.20.2011
L1.01



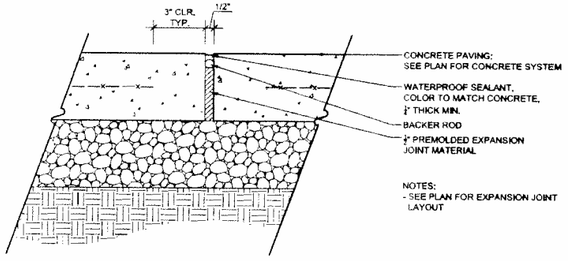
1 / L2.01 CONCRETE SIDEWALK — PLAN
Scale: 1/2" = 1'-0"



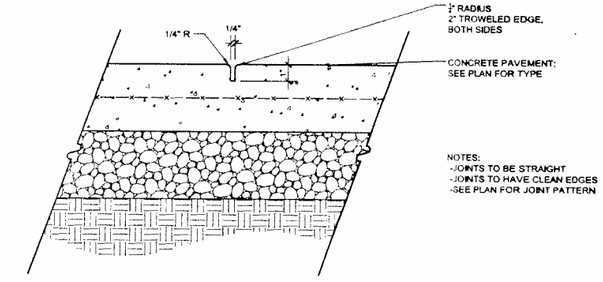
2 / L2.01 CONCRETE PAVING — SECTION
Scale: 1 1/2" = 1'-0"



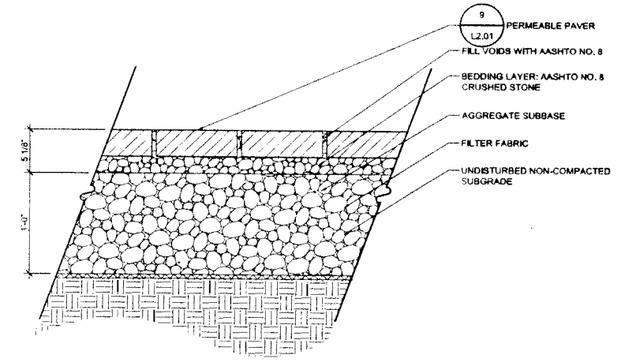
3 / L2.01 SCORED PERVIOUS CONCRETE — SECTION
Scale: 1 1/2" = 1'-0"



4 / L2.01 EXPANSION JOINT — SECTION
Scale: 3" = 1'-0"



5 / L2.01 CONTROL JOINT — SECTION
Scale: 3" = 1'-0"



6 / L2.01 PERVIOUS PAVER SYSTEM — SECTION
Scale: 1 1/2" = 1'-0"

BENCH

MODEL	SP-8
MANUFACTURER:	VICTOR STANLEY
QUANTITY:	PER PLAN
NOTE:	CONTRACTOR TO VERIFY QUANTITIES. INSTALL PER MANUFACTURERS RECOMMENDATION

7 / L2.01 BENCH — PROD. INFO.
Scale: NTS

STREETLIGHT LIGHT

MODEL:	CAPITOL NARROW V4800
MANUFACTURER:	HADCO LIGHTING 43 OCELOT DRIVE HANOVER, PA 17331
CONTACT:	DAVE DEPORTER M: 410.905.3861 F: 717.630.0750
QUANTITY:	PER PLAN
COLOR	TBD
NOTES:	INSTALL PER MANUFACTURERS SPECIFICATIONS

8 / L2.01 STREETLIGHT — PROD. INFO.
Scale: NTS

PERMEABLE PAVER

MODEL:	4x8x2-3/4"
MANUFACTURER:	BORAL BRICK WWW.BORALBRICKS.COM
SUPPLIER:	POTOMAC VALLEY BRICK 8306 CINDERBED ROAD NEWINGTON, VA 22079
CONTACT:	CHRIS MAYER M: 703.587.9803
QUANTITY:	PER PLAN
COLOR:	TBD
NOTES:	INSTALL PER MANUFACTURERS SPECIFICATIONS

9 / L2.01 PERMEABLE PAVER — PROD. INFO.
Scale: NTS

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REED BROTHERS AT SHADY GROVE METRO
ROCKVILLE, MARYLAND
SILVERWOOD/ SHADYGROVE, LLC.

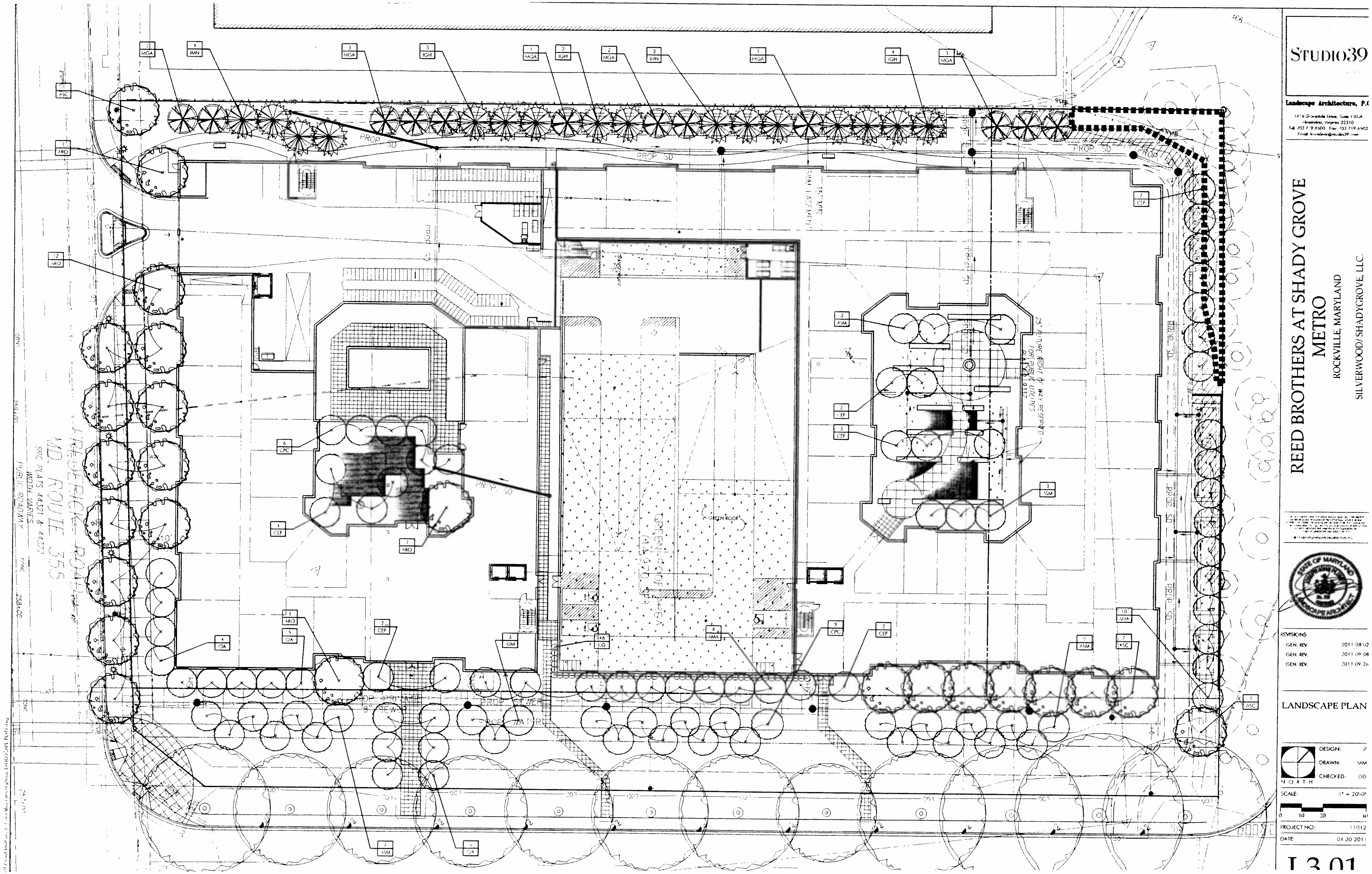
REVISIONS:
GEN. REV. 2011.09.2

HARDSCAPE DETAILS

DESIGN: JF
DRAWN: MM
CHECKED: DD
N O R T H
SCALE: AS SHOWN

PROJECT NO: 11312
DATE: 04.20.2011

L2.01


STUDIO39
Landscape Architecture, P.C
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REED BROTHERS AT SHADY GROVE METRO
ROCKVILLE, MARYLAND
SILVERWOOD/SHADYGROVE, LLC
REVISIONS:
GEN. REV. 2011.08.02
GEN. REV. 2011.09.08
GEN. REV. 2011.09.26
LANDSCAPE PLAN
DESIGN: JP
DRAWN: MM
CHECKED: DD
NORTH
SCALE: 1" = 20'-0"
PROJECT NO: 11012
DATE: 04.20.2011
L3.01
FREDERICK ROAD
MD. ROUTE 355
GREEN ROOF AREA
PROP. SD
PROP. SEWER
PROP. WATER
25' FUTURE RIGHT OF WAY RESERVED FOR PUBLIC UTILITIES
15' WMF EASEMENT

PLANT LIST

SHADE TREES

QTY	KEY	GENUS	SPECIES	VARIETY	COMMON NAME	HEIGHT	CALIPER	REMARKS
15	ARO	Acer	rubrum	'October Glory'	October Glory Red Maple	14 - 16'	3 - 3 1/2"	B&B, full uniform crown, symmetrical branching, full specimen
9	ASC	Acer	saccharum		Sugar Maple	14 - 16'	3 - 3 1/2"	B&B, full uniform crown, symmetrical branching, full specimen

ORNAMENTAL TREES

QTY	KEY	GENUS	SPECIES	VARIETY	COMMON NAME	HEIGHT	CALIPER	REMARKS
25	ASM	Acer	pensylvanicum		Striped Maple	10 - 12'	2 1/2" min.	B&B, full uniform crown, symmetrical branching, single stem trunk
19	AMA	Amelanchier	x grandiflora	'Autumn Brilliance'	Autumn Brilliance Serviceberry	10 - 12'	2 1/2" min.	B&B, full uniform crown, symmetrical branching, single stem trunk
15	CPC	Carpinus	caroliniana		Ironwood	10 - 12'	2 1/2" min.	B&B, full uniform crown, symmetrical branching, single stem trunk
20	CEF	Cercis	canadensis	'Forest Pansy'	Forest Pansy Eastern Redbud	10 - 12'	2 1/2" min.	B&B, full uniform crown, symmetrical branching, single stem trunk
15	OA	Oxydendrum	arboreum		Sourwood, Lilly of the Valley Tree	10 - 12'	2 1/2" min.	B&B, full uniform crown, symmetrical branching, single stem trunk

EVERGREEN TREES

QTY	KEY	GENUS	SPECIES	VARIETY	COMMON NAME	HEIGHT	SPREAD	REMARKS
12	MGA	Magnolia	grandiflora		Southern Magnolia	7 - 8	3 1/2 - 5'	B&B, full to ground, symmetrical branching.
9	IGH	Ilex	x	'Greenleaf'	Greenleaf Holly	7 - 8	3 1/2 - 5'	B&B, full to ground, symmetrical branching
7	IMN	Ilex	x	'Nellie R. Stevens'	Nellie R Stevens Holly	7 - 8	3 1/2 - 5'	B&B, full to ground, symmetrical branching

SHRUBS

QTY	KEY	GENUS	SPECIES	VARIETY	COMMON NAME	HEIGHT	SPREAD	REMARKS
46	ILG	Ilex	glabra	'Shamrock'	Shamrock Inkberry	24 - 30"	18 - 24"	#3 cont., healthy, vigorous, well-rooted & established in container

NOTE:
- ALL TREES TO BE SINGLE STEM FORM
- STREET TREES SPACED 30' O.C.
- SHADE TREES SPACED 20' O.C. MIN.
- ORNAMENTAL TREES SPACED 15' O.C. MIN.
- EVERGREEN TREES SPACED 15' O.C. MIN.

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REED BROTHERS AT SHADY GROVE METRO
ROCKVILLE, MARYLAND
SILVERWOOD/ SHADYGROVE, LLC.

STATE OF MARYLAND LANDSCAPE ARCHITECT

REVISIONS:
GEN. REV. 2011 08.0[cut off]
GEN. REV. 2011 09 0[cut off]
GEN. REV. 2011 09 2[cut off]

PLANT LIST

DESIGN: JP[cut off]
DRAWN: MM
CHECKED: DD
NORTH
SCALE:
PROJECT NO: 11012
DATE: 04 20 2011

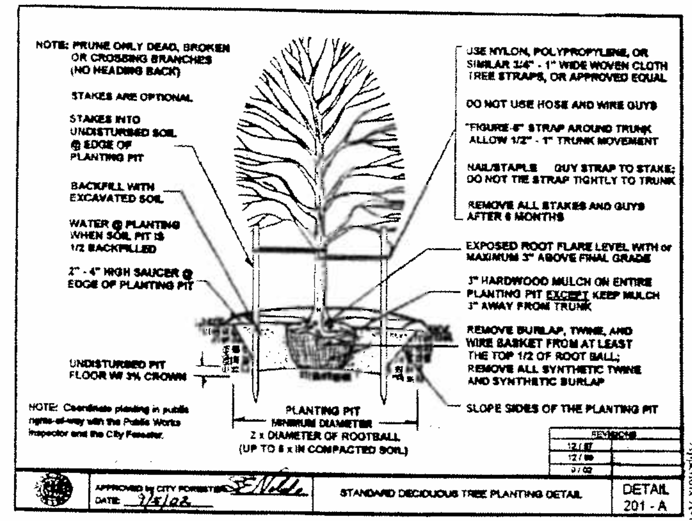
L2.02

PLANTING NOTES:

1. PLANT MATERIAL SHALL BE FURNISHED AND INSTALLED AS INDICATED, INCLUDING ALL LABOR, MATERIALS, PLANTS, EQUIPMENT, INCIDENTALS, AND CLEAN-UP.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT CORRECT GRADES AND ALIGNMENT. LAYOUT TO BE APPROVED BY OWNERS' REPRESENTATIVE PRIOR TO INSTALLATION.
3. PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS, WELL-DEVELOPED DENSELY FOLIATED BRANCHES, AND VIGOROUS ROOT SYSTEMS; AND BE FREE FROM DEFECTS AND INJURIES.
4. CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO GROWTH OF PLANT MATERIAL.
5. ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR TO BE IN VIGOROUS GROWING CONDITION. PROVISION SHALL BE MADE FOR A GROWTH GUARANTEE OF AT LEAST ONE YEAR FROM THE DATE OF ACCEPTANCE FOR TREES, SHRUBS, GROUNDCOVER AND PERENNIALS. ALL REPLACEMENTS SHALL HAVE A GUARANTEE EQUAL TO THAT STATED ABOVE.
6. PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY IF/WHEN PRACTICAL. IN THE EVENT THAT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT STOCK NOT PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE-DAY PERIOD AFTER DELIVERY. ANY PLANTS NOT INSTALLED DURING THIS PERIOD SHALL BE REJECTED, UNLESS OWNER AND CONTRACTOR PROVIDE OTHERWISE BY WRITTEN AGREEMENT.
7. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS, AND SIZE OF ROOT BALL SHALL BE IN ACCORDANCE WITH THE MOST RECENT VERSION OF ANSI Z60 "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
8. ALL PLANTS SHALL BE PLANTED IN AMENDED TOP SOIL THAT IS THOROUGHLY WATERED AND TAMPED AS BACK-FILLING PROCESSES. PLANTING MIX TO BE AS SHOWN ON PLANTING DETAILS. LARGE PLANTING AREAS TO INCORPORATE FERTILIZER AND SOIL CONDITIONERS AS STATED IN PLANTING SPECIFICATIONS.
9. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE HANDLED FORM THE BOTTOM OF THE BALL ONLY.
10. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH CITY OF ROCKVILLE. PLANTS SHALL NOT BE INSTALLED IN TOP SOIL THAT IS IN A MUDDY OR FROZEN CONDITION. ALL PLANT MATERIAL SHALL BE SPRAYED WITH "WILT-PRUF" OR EQUAL AS PER MANUFACTURER'S INSTRUCTIONS.
11. NO PLANT, EXCEPT GROUND COVERS, SHALL BE PLANTED LESS THAN TWO FEET FROM EXISTING STRUCTURES AND SIDEWALKS.
12. SET ALL PLANTS PLUMB AND STRAIGHT. LOCATE THE PLANT IN THE CENTER OF THE PIT.
13. ALL INJURED ROOTS SHALL BE PRUNED TO MAKE CLEAN ENDS BEFORE PLANTING UTILIZING CLEAN, SHARP TOOLS.
14. TREES SHALL BE SUPPORTED IMMEDIATELY AFTER PLANTING. ALL TREES SHALL BE STAKED PER CITY OF ROCKVILLE DETAILS 1/L4.01 AND 2/L4.01. THE LANDSCAPE CONTRACTOR SHALL REMOVE STAKING AFTER 6 MONTHS.
15. ALL PLANTING BEDS SHALL BE MULCHED WITH 2" LAYER OF SHREDDED HARDWOOD MULCH.
16. NEW PLANTING AREAS AND SOD SHALL BE ADEQUATELY WATERED TO ESTABLISH THE PROPOSED PLANTS AND LAWN.
17. ALL PLANTS SHOWN ON THE APPROVED LANDSCAPE PLAN SHALL BE INSTALLED, INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE AND CITY OF ROCKVILLE FORESTRY INSPECTOR.
18. ALL DISTURBED AREAS SHALL BE TREATED WITH 4" TOP SOIL SODDED OR SEEDED AS NOTED IN ACCORDANCE WITH PERMANENT STABILIZATION METHODS INDICATED ON SOIL EROSION AND SEDIMENT CONTROL SHEET. PLANTING AREAS THAT CONTAIN PAVEMENT OR IMPERVIOUS SURFACES MUST BE EXCAVATED TO A DEPTH OF TWO FEET AND THE SOIL REPLACED WITH A PLANTING SOIL MIX.
19. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL PLANT MAINTENANCE; INCLUDING SHRUBS AND GROUNDCOVER, AND SHALL MAINTAIN AREA IN A WEED AND DEBRIS FREE CONDITION THROUGHOUT THE ONE-YEAR GUARANTEE PERIOD, UNLESS OTHERWISE SPECIFIED. THE OWNER MUST WARRANTY THE PROJECT FOR FIVE YEARS TO THE CITY OF ROCKVILLE.
20. ALL DIMENSIONS TO BE TAKEN FROM BACK OF CURB.
21. CONTRACTOR SHALL LAYOUT AND CLEARLY STAKE ALL PROPOSED IMPROVEMENTS INCLUDED ON THIS PLAN.
22. CONTRACTOR IS RESPONSIBLE FOR CONTACTING UTILITY COMPANY PRIOR TO BEGINNING CONSTRUCTION FOR LOCATION OF ALL UTILITY LINES. TREES SHALL BE LOCATED A MINIMUM OF 5' FROM SEWER/WATER CONNECTIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.
23. CONTRACTOR TO VERIFY PLANT LIST TOTALS WITH QUANTITIES SHOWN ON PLAN. LANDSCAPE ARCHITECT SHALL BE ALERTED BY CONTRACTOR OF ANY DISCREPANCIES PRIOR TO FINAL BID NEGOTIATION. UNIT PRICES FOR ALL MATERIAL SHALL BE SUPPLIED TO THE OWNER AT BIDDING TIME.
24. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE LANDSCAPE ARCHITECT AND CITY OF ROCKVILLE FORESTRY INSPECTOR. OWNER SHALL RECEIVE TAG FROM EACH PLANT SPECIES AND A LIST OF PLANT SUPPLIERS. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL MEET THE NORMAL REQUIREMENTS FOR THE VARIETY PER THE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN).
25. WHERE TREES ARE PLANTED IN ROWS, THEY SHALL BE UNIFORM IN SIZE AND SHAPE.
26. SIZES SPECIFIED IN THE PLANT LIST ARE MINIMUM SIZES TO WHICH THE PLANTS ARE TO BE JUDGED. FAILURE TO MEET MINIMUM SIZE ON ANY PLANT WILL RESULT IN REJECTION OF THAT PLANT.
27. ALL PLANTS SHALL BE FRESHLY DUG, SOUND, HEALTHY, VIGOROUS, WELL BRANCHED, FREE OF DISEASE, INSECT EGGS, AND LARVAE, AND SHALL HAVE ADEQUATE ROOT SYSTEMS.
28. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.
29. GROUPS OF SHRUBS SHALL BE PLACED IN A CONTINUOUS MULCH BED WITH SMOOTH CONTINUOUS LINES. ALL MULCHED BED EDGES SHALL BE CURVILINEAR IN SHAPE FOLLOWING THE CONTOUR OF THE PLANT MASS. TREES LOCATED WITHIN FOUR FEET OF SHRUB BEDS SHALL SHARE SAME MULCH BED.
30. NO EXISTING TREES SHALL BE REMOVED WITHOUT WRITTEN AUTHORIZATION FROM THE OWNER AND CITY OF ROCKVILLE FORESTRY INSPECTOR EXCEPT WHERE NOTED ON PLANS. NO GRUBBING SHALL OCCUR WITHIN EXISTING TREE AREAS.
31. TREES SHALL BE LOCATED A MINIMUM OF 3' - 4' FROM WALLS AND WALKS WITHIN THE PROJECT. IF CONFLICTS ARISE BETWEEN ACTUAL SIZE OF AREA AND PLANS, CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT AND CITY OF ROCKVILLE FORESTRY INSPECTOR FOR RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN TO THE OWNER, LANDSCAPE ARCHITECT, AND CITY OF ROCKVILLE FORESTRY INSPECTOR WILL RESULT IN CONTRACTOR'S LIABILITY TO RELOCATE MATERIALS.
32. LARGE GROWING PLANTS ARE NOT TO BE PLANTED IN FRONT OF WINDOWS, UNDER BUILDING OVERHANGS, OR IN DRAINAGE SWALES. SHRUBS PLANTED NEAR H.V.A.C. UNITS TO BE LOCATED SO THAT SHRUBS AT MATURITY WILL MAINTAIN 1' AIRSPACE BETWEEN UNIT AND PLANT.
33. CONTRACTOR TO SLIGHTLY ADJUST PLANT LOCATIONS IN THE FIELD AS NECESSARY TO BE CLEAR OF DRAINAGE SWALES AND UTILITIES. FINISHED PLANTING BEDS SHALL BE GRADED SO AS TO NOT IMPEDE DRAINAGE AWAY FROM BUILDINGS.
34. TREE STAKING SHALL BE DONE PER DETAILS. CONTRACTOR SHALL ENSURE THAT TREES REMAIN VERTICAL AND UPRIGHT FOR THE DURATION OF THE GUARANTEE PERIOD.
35. ALL TREE PITS, SHRUB BEDS AND PREPARED PLANTING BEDS ARE TO BE COMPLETELY EXCAVATED IN ACCORDANCE WITH THE PLANTING DETAILS.
36. MULCH IS TO BE FINE BARK TYPE FOR TREES AND SHRUBS. FINE BARK MULCH IS TO BE USED FOR PERENNIAL BEDS AND WITHIN THE "EXISTING TREES TO REMAIN." CONTRACTOR TO SUBMIT SAMPLE FOR APPROVAL PRIOR TO INSTALLATION.
37. CROWN OF ROOT BALL SHALL BE HIGHER THAN ADJACENT SOIL BUT NO MORE THAN THREE INCHES ABOVE EXISTING GRADE.
38. TAGS AND TWINE ARE TO BE REMOVED AND BURLAP IS TO BE ROLLED BACK ONE-HALF ON ALL B&B PLANT MATERIAL. REMOVE BURLAP IF IT IS NON-BIODEGRADABLE. FOR STREET TREES TAGS, TWINE, CORD, BURLAP AND WIRE BASKET TO BE CUT HALF WAY DOWN SIDE OF ROOT BALL AND REMOVED FROM PROJECT SITE.
39. SHRUBS AND GROUND COVERS SHALL BE TRIANGULARLY SPACED AT SPACING SHOWN ON PLANTING PLANS.
40. SHADE TREES: HEIGHT SHALL BE MEASURED FROM THE CROWN OF THE ROOT BALL TO THE TOP OF MATURE GROWTH. SPREAD SHALL BE MEASURED TO THE END OF BRANCHING EQUALLY AROUND THE CROWN FROM THE CENTER OF THE TRUNK. MEASUREMENTS ARE NOT TO INCLUDE ANY TERMINAL GROWTH. SINGLE TRUNK TREES SHALL BE FREE OF "V" CROTCHES THAT COULD BE POINTS OF WEAK LIMB STRUCTURE OR DISEASE INFESTATION. SHRUBS: HEIGHT SHALL BE MEASURED FROM THE GROUND TO THE AVERAGE HEIGHT OF THE TOP OF THE PLANT. SPREAD SHALL BE MEASURED TO THE END OF BRANCHING EQUALLY AROUND THE SHRUB MASS. MEASUREMENTS ARE NOT TO INCLUDE ANY TERMINAL GROWTH.
41. ALL SUBSTITUTIONS OF PLANT MATERIAL ARE TO BE REQUESTED IN WRITING TO THE LANDSCAPE ARCHITECT AND APPROVED BY THE OWNER AND CITY OF ROCKVILLE FORESTRY INSPECTOR. IF CONTRACTOR FAILS TO SUBMIT A WRITTEN REQUEST, IT WILL RESULT IN LIABILITY TO THE CONTRACTOR. SUBSTITUTIONS ARE GENERALLY NOT PERMITTED BY THE CITY OF ROCKVILLE.
42. ALL CONTRACTORS SHALL BE REQUIRED TO COMPLETELY REMOVE ALL TRASH, DEBRIS AND EXCESS MATERIALS FROM THE WORK AREA AND THE PROPERTY, ESPECIALLY AT ALL CURB, GUTTERS AND SIDEWALKS DAILY DURING INSTALLATION.
43. DEAD PLANTS ARE TO BE REMOVED FROM THE JOB BY THE CONTRACTOR WEEKLY. CONTRACTOR SHALL MAINTAIN AN UPDATED, COMPREHENSIVE LIST OF ALL DEAD MATERIALS REMOVED FROM THE JOB SITE. A COPY OF THE LIST IS TO BE SUBMITTED TO THE OWNER AT THE END OF EVERY MONTH DURING THE CONTRACT PERIOD.
44. TOPSOIL REQUIRED FOR SOIL MIXES AND SPECIAL SEEDING AREAS SHALL BE PROVIDED BY LANDSCAPE CONTRACTOR. CONTRACTOR MUST LOAD, HAUL, MIX, AND SPREAD ALL TOPSOIL AND OTHER SOIL ADDITIVES ARE REQUIRED.
45. THE INTENT OF THE PROJECT IS TO HAVE NATURAL DRIFTS OF PERENNIALS IN PLANTING. KEEP SWEEPS OF SIMILAR BULBS/PERENNIALS IN SEPARATE GROUPS.
46. CONTRACTOR SHALL BE RESPONSIBLE TO RE-GRADE, SEED, STRAW MULCH, AND TACK ALL LAWN AREAS DISTURBED AS THE RESULT OF HIS WORK.
47. ALL EXISTING SOIL TO BE REMOVED FROM PERENNIAL BEDS TO A DEPTH OF 12" AND REPLACED WITH SOIL MIX PER DETAIL.
48. CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE IMPROVEMENTS, INCLUDING SEEDING, FOR ONE FULL YEAR AS REQUIRED BY THE SPECIFICATIONS. CONTRACTOR MUST CONTACT THE OWNER AT LEAST TEN WORKING DAYS IN ADVANCE TO SCHEDULE ACCEPTANCE INSPECTION(S). CONTRACTOR MUST REPLACE ALL DEAD OR UNACCEPTABLE PLANTS DURING THE FOLLOWING RECOMMENDED PLANTING SEASON.
49. THE SPECIFICATIONS FOR ALL WORK INCLUDED IN THIS CONTRACT SHALL BE LANDSCAPE SPECIFICATIONS GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREA, CURRENT EDITION, UNLESS OTHERWISE NOTED ON THESE PLANS.
50. ANY PLANTING WHICH IS SHOWN ADJACENT TO CONDENSER UNITS SHALL BE PLANTED AS REQUIRED TO SCREEN THE UNITS. SHOULD THE CONDENSER UNITS BE INSTALLED IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE PLAN IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL THE MATERIALS AROUND THE CONDENSERS AND TO ADJUST OTHER ADJACENT PLANTING ACCORDINGLY.
51. ALL PLANTING MATERIAL, INCLUDING TREES SHALL CONFORM TOT HE STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN AND SHALL PASS ANY INSPECTION REQUIRED UNDER MARYLAND REGULATIONS AND CITY OF ROCKVILLE PLANTING REQUIREMENTS.

PLANTING MIX NOTES:

1. THE RECOMMENDED PLANTING MEDIUM SHOULD CONTAIN GOOD TOP SOIL THAT WILL SUSTAIN PLANT GROWTH.
2. THE TOP SOIL SHALL NOT BE LACKING IN POTASSIUM, PHOSPHORUS, MAGNESIUM OR CALCIUM. THE TOP SOIL SHALL NOT CONTAIN ANY MATERIALS TOXIC TO PLANT GROWTH.
3. THE TOP SOIL SHALL BE A SANDY CLAY LOAM OR A SILTY CLAY LOAM WITH WELL AGGREGATED CLAYS AND A MINIMUM OF 4% (FOUR PERCENT) ORGANIC MATTER.
4. THE SOILS PH RANGE SHOULD BE WITHIN 5.5 TO 7.0 AND ADJUSTED AS NECESSARY FOR INDIVIDUAL PLANT SPECIES REQUIREMENTS.
5. A SOIL TEST SHALL BE PERFORMED BY A FULL-SERVICE TESTING COMPANY AND THE RESULTS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF PLANTING MEDIUM.
6. IF A LOCAL, REPUTABLE TESTING COMPANY CANNOT BE EMPLOYED, A&L LABS IS AVAILABLE TO CONDUCT THE TESTING. CONTACT THEM AT:
   A&L ANALYTICAL LABORATORIES, INC.
   2790 WHITTEN ROAD



1 / L4.01 DECIDUOUS TREE PLANTING DETAIL — SECTION
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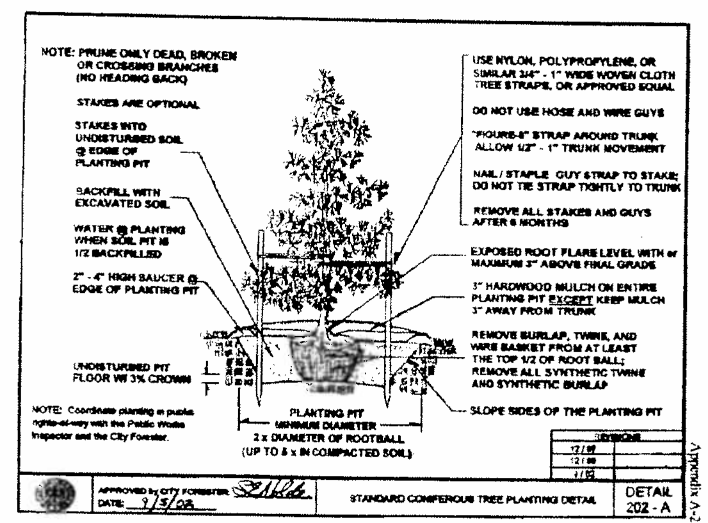

2 / L4.01 CONIFEROUS TREE PLANTING DETAIL — SECTION
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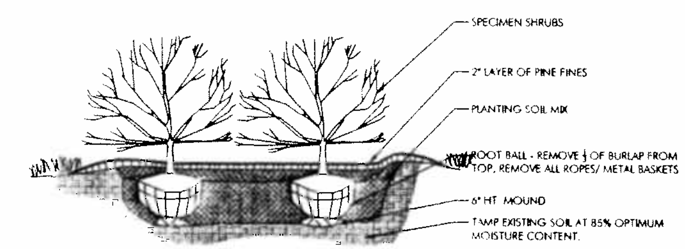
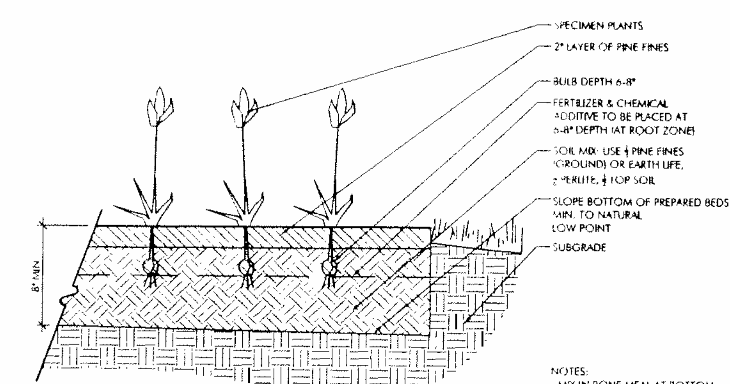


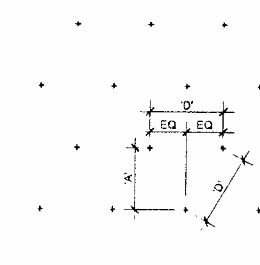
NOTES:
- SCARIFY ROOTS OF ROOT BOUND PLANTS
- PLANT SPACING VARIES. SEE PLANS, SPACING DETAIL AND SCHEDULE
- PRUNE ALL BROKEN, DISEASED & WEAK BRANCHES
- ALL SHRUB BEDS TO BE COMPLETELY EXCAVATED OF ALL EXISITNG SOIL TO DEPTH REQUIRED FOR SOIL MIX BACKFILL.
- REMOVE ALL STRINGS, RIBBONS & TAGS FROM PLANTS.

4 / L4.01 SHRUB PLANTING DETAIL — SECTION
Scale: NTS



NOTES:
- MIX IN BONE MEAL AT BOTTOM OF BULBS WHEN PLANTED

5 / L4.01 ANNUALS & PERENNIALS DETAIL — SECTION
Scale: NTS



PLANT SPACING CHART
AS SPECIFIED ON PLANT LIST

SPACING 'D'	ROW 'A'	NUMBER OF PLANTS PER SQUARE FOOT
6" o.c.	5 1/4" o.c.	4.62
8" o.c.	6 7/8" o.c.	2.60
10" o.c.	8 5/8" o.c.	1.66
12" o.c.	10 3/8" o.c.	1.15
15" o.c.	13" o.c.	0.74
18" o.c.	15 5/8" o.c.	0.51
24" o.c.	20 3/4" o.c.	0.29
30" o.c.	26" o.c.	0.18
36" o.c.	31 1/8" o.c.	0.13
42" o.c.	36 3/8" o.c.	0.09
48" o.c.	41 5/8" o.c.	0.07

6 / L4.01 GROUNDCOVER SPACING
Scale: NTS

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REED BROTHERS AT SHADY GROVE METRO
ROCKVILLE, MARYLAND
SILVERWOOD/ SHADYGROVE, LLC.

REVISIONS:
GEN. REV. 2011 09 2

PLANTING DETAILS

NORTH
DESIGN: JP
DRAWN: MM
CHECKED: DD
SCALE: AS SHOWN
PROJECT NO: 11012
DATE: 04 20 2011

L4.01